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STN search for 10765,797

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NEWS	13 DEC 17	THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB
NEWS	14 DEC 30	EPFULL: New patent full text database to be available on STN
NEWS	15 DEC 30	CAPLUS - PATENT COVERAGE EXPANDED
NEWS	16 JAN 03	No connect-hour charges in EPFULL during January and February 2005
NEWS	17 JAN 26	CA/CAPLUS - Expanded patent coverage to include the Russian Agency for Patents and Trademarks (ROSPATENT)
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Cynthia Hamilton

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FILE COVERS 1907 - 23 Feb 2005 VOL 142 ISS 9

FILE LAST UPDATED: 22 Feb 2005 (20050222/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s perflouro? and (ir or infrared or infra red)adj (absorb? or dye)

MISSING OPERATOR RED)ADJ

The search profile that was entered contains terms or nested terms that are not separated by a logical operator.

=> s perflouro? and (ir or infrared or infra red) adj (absorb? or dye)

MISSING OPERATOR RED) ADJ

The search profile that was entered contains terms or nested terms that are not separated by a logical operator.

=> s perflouro? and (ir or infrared or infra red) (w) (absorb? or dye)

41 PERFLOURO?

560255 IR

231792 INFRARED

4650 INFRA

362070 RED

4046 INFRA RED

(INFRA(W)RED)

384343 ABSORB?

242300 DYE

5033 (IR OR INFRARED OR INFRA RED) (W) (ABSORB? OR DYE)

L1 0 PERFLOURO? AND (IR OR INFRARED OR INFRA RED) (W) (ABSORB? OR DYE)

=> s l1 and lithograph?

STN search for 10765,797

43683 LITHOGRAPH?

L2 0 L1 AND LITHOGRAPH?

=> s perflouroalkyl? and (ir or infrared or infra red) adj (absorb? or dye)
MISSING OPERATOR RED) ADJ

The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s perflouroalkyl? and (ir or infrared or infra red) (w) (absorb? or dye)

8 PERFLOUROALKYL?

560255 IR

231792 INFRARED

4650 INFRA

362070 RED

4046 INFRA RED

(INFRA(W)RED)

384343 ABSORB?

242300 DYE

5033 (IR OR INFRARED OR INFRA RED) (W) (ABSORB? OR DYE)

L3 0 PERFLOUROALKYL? AND (IR OR INFRARED OR INFRA RED) (W) (ABSORB?
OR DYE)

=> s perfluoroalkyl? and (ir or infrared or infra red) (w) (absorb? or dye)

12074 PERFLUOROALKYL?

560255 IR

231792 INFRARED

4650 INFRA

362070 RED

4046 INFRA RED

(INFRA(W)RED)

384343 ABSORB?

242300 DYE

5033 (IR OR INFRARED OR INFRA RED) (W) (ABSORB? OR DYE)

L4 7 PERFLUOROALKYL? AND (IR OR INFRARED OR INFRA RED) (W) (ABSORB?
OR DYE)

=> d all 1-7

L4 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:1125832 CAPLUS

DN 142:82495

ED Entered STN: 24 Dec. 2004

TI Near IR-shielding optical filter containing diimmonium pigment for plasma
display panel

IN Nakatsugawa, Yuji; Inoue, Isao; Tsuzuki, Atsuro

PA Dainippon Printing Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 20 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G02B005-22

ICS B32B007-02; B32B027-18; C09K003-00; G09F009-00

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

Section cross-reference(s): 38, 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004361525	A2	20041224	JP 2003-157403	20030603
PRAI	JP 2003-157403		20030603		

STN search for 10765,797

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004361525	ICM	G02B005-22
	ICS	B32B007-02; B32B027-18; C09K003-00; G09F009-00
JP 2004361525	FTERM	2H048/CA04; 2H048/CA12; 2H048/CA19; 2H048/CA24; 4F100/AB01E; 4F100/AH03H; 4F100/AK01B; 4F100/AK25; 4F100/AK42; 4F100/AR00A; 4F100/AR00C; 4F100/AR00D; 4F100/AR00E; 4F100/BA02; 4F100/BA03; 4F100/BA04; 4F100/BA05; 4F100/BA10A; 4F100/BA10B; 4F100/BA10C; 4F100/BA10D; 4F100/BA10E; 4F100/CA30B; 4F100/DC16E; 4F100/GB41; 4F100/GB56; 4F100/JA05B; 4F100/JB05B; 4F100/JD08; 4F100/JD10B; 4F100/JD10H; 4F100/JJ03; 4F100/JL06C; 4F100/JL06D; 4F100/JL13E; 4F100/JN01A; 4F100/JN01B; 4F100/JN02; 4F100/JN06E; 4F100/JN18; 4F100/JN30E; 4F100/YY00; 4F100/YY00B; 5G435/AA06; 5G435/BB06; 5G435/DD12; 5G435/FF14; 5G435/GG33; 5G435/HH03
AB		The optical filter comprises a transparent substrate (e.g., PET film) laminated with a near IR absorbing layer containing a transparent binder and a near IR absorbing pigment (e.g., IRG 022 and Excolor IR 1), wherein the refractive index difference of the near IR absorbing layer and the adjacent layer is 0.03-0.14.
ST		near IR shielding optical filter plasma display panel
IT		Optical materials (IR absorbers ; near IR-shielding optical filter containing diimmonium pigment for plasma display panel)
IT		IR materials (absorbers; near IR-shielding optical filter containing diimmonium pigment for plasma display panel)
IT		Electromagnetic shields Optical films Optical filters Plasma display panels (near IR-shielding optical filter containing diimmonium pigment for plasma display panel)
IT		Fluoropolymers, uses RL: TEM (Technical or engineered material use); USES (Uses) (perfluoroalkyl polysiloxane-, antifouling agent; near IR-shielding optical filter containing diimmonium pigment for plasma display panel)
IT		Polysiloxanes, uses RL: TEM (Technical or engineered material use); USES (Uses) (perfluoroalkyl , antifouling agent; near IR-shielding optical filter containing diimmonium pigment for plasma display panel)
IT		Acrylic polymers, uses Polycarbonates, uses Polyesters, uses RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses) (transparent, binder; near IR-shielding optical filter containing diimmonium pigment for plasma display panel)
IT		5496-71-9, IRG 022 240417-50-9, Excolor IR 1 RL: DEV (Device component use); USES (Uses) (near IR absorber ; near IR-shielding optical filter containing diimmonium pigment for plasma display panel)
IT		9002-88-4, Polyethylene 25038-59-9, PET polymer, uses RL: TEM (Technical or engineered material use); USES (Uses) (transparent substrate; near IR-shielding optical filter containing

STN search for 10765,797

diimmonium pigment for plasma display panel)

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:779904 CAPLUS
DN 141:304301
ED Entered STN: 24 Sep 2004
TI Heat-sensitive lithographic printing plate precursor containing **IR absorbing dye with perfluoroalkyl substituent**
IN Deroover, Geert; Van Damme, Marc
PA Agfa-Gevaert, Belg.
SO U.S. Pat. Appl. Publ., 17 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM B41N001-00
NCL 101453000
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004182268	A1	20040923	US <u>2004-765797</u>	20040127
	JP 2004341484	A2	20041202	JP 2004-18894	20040127
PRAI	EP 2003-100154	A	20030127		
	US 2003-444470P	P	20030203		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004182268	ICM	B41N001-00
	NCL	101453000
JP 2004341484	FTERM	2H025/AA02; 2H025/AA04; 2H025/AB03; 2H025/AC08; 2H025/AD03; 2H025/CB51; 2H025/CC11; 2H025/DA03; 2H025/FA17; 2H096/AA06; 2H096/BA09; 2H096/EA04; 2H096/GA08

this
Appl. *cf*

60/444,470

OS MARPAT 141:304301
AB A heat-sensitive pos. working lithog. printing plate precursor is described that has high differentiation between exposed and non-exposed areas and which has high sensitivity. Thus, the plate precursor comprises a hydrophilic support and a coating consisting of a first layer containing an oleophilic resin soluble in an aqueous alkaline developer and a second layer containing a

water repellent compound The coating comprises an **IR absorbing dye sensitizer** containing a **perfluoroalkyl** group that provides the printing plate precursor with high sensitivity. The **IR absorbing dye** can be present in the first layer, or in the second layer or in the optional other layer.

ST heat sensitive lithog printing plate precursor **IR dye**; **perfluoroalkyl** substituent **IR dye** lithog printing plate precursor

IT Dyes

(**IR-absorbing**; heat-sensitive pos. lithog. printing plate precursor containing **IR absorbing dye** with **perfluoroalkyl** substituent)

IT Surfactants

(heat-sensitive pos. lithog. printing plate precursor containing **IR absorbing dye** with **perfluoroalkyl** substituent)

IT Lithographic plates

(heat-sensitive; heat-sensitive pos. lithog. printing plate precursor containing **IR absorbing dye** with **perfluoroalkyl** substituent)

STN search for 10765,797

IT Polysiloxanes, uses
RL: DEV (Device component use); USES (Uses)
(polyether-, Tego wet 265, oleophilic resin layer; heat-sensitive pos. lithog. printing plate precursor containing **IR absorbing** dye with **perfluoroalkyl** substituent)

IT Polysiloxanes, uses
RL: DEV (Device component use); USES (Uses)
(polyoxyalkylene-, graft, Tego glide 410, oleophilic resin layer; heat-sensitive pos. lithog. printing plate precursor containing **IR absorbing** dye with **perfluoroalkyl** substituent)

IT Polyoxyalkylenes, uses
RL: DEV (Device component use); USES (Uses)
(polysiloxane-, graft, Tego glide 410, oleophilic resin layer; heat-sensitive pos. lithog. printing plate precursor containing **IR absorbing** dye with **perfluoroalkyl** substituent)

IT Polyethers, uses
RL: DEV (Device component use); USES (Uses)
(siloxane-, Tego wet 265, oleophilic resin layer; heat-sensitive pos. lithog. printing plate precursor containing **IR absorbing** dye with **perfluoroalkyl** substituent)

IT 134127-48-3
RL: NUU (Other use, unclassified); USES (Uses)
(comparison dye; heat-sensitive pos. lithog. printing plate precursor containing **IR absorbing** dye with **perfluoroalkyl** substituent)

IT 762276-41-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(comparison dye; heat-sensitive pos. lithog. printing plate precursor containing **IR absorbing** dye with **perfluoroalkyl** substituent)

IT 762276-37-9P 762276-38-0P 762276-39-1P 762276-40-4P
RL: DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; heat-sensitive pos. lithog. printing plate precursor containing **IR absorbing** dye with **perfluoroalkyl** substituent)

IT 573-11-5, 2,3,4-Trimethoxybenzoic acid 1320-67-8, Methoxypropanol 56730-76-8, Fluorad 100346-90-5, Alnovol SPN452
RL: DEV (Device component use); USES (Uses)
(heat-sensitive pos. lithog. printing plate precursor containing **IR absorbing** dye with **perfluoroalkyl** substituent)

IT 142-04-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(intermediate in synthesis of comparison dye; synthesis of **IR absorbing** dye sensitizer)

IT 98826-99-4P 762276-49-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate in synthesis of comparison dye; synthesis of **IR absorbing** dye sensitizer)

IT 15901-42-5 41532-84-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(intermediate; synthesis of **IR absorbing** dye sensitizer)

IT 6761-94-0P 29457-72-5P 61010-04-6P 121276-93-5P 200574-76-1P 263762-34-1P 762276-42-6P 762276-43-7P 762276-44-8P 762276-45-9P 762276-46-0P 762276-47-1P 762276-48-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; synthesis of **IR absorbing** dye)

STN search for 10765,797

sensitizer)
IT 7429-90-5D, Aluminum, oxidized
RL: DEV (Device component use); USES (Uses)
(support; Heat-sensitive lithog. printing plate precursor containing
IR absorbing dye with perfluoroalkyl
substituent)
IT 530-62-1, 1,1'-Carbonyldiimidazole 34598-33-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of IR absorbing dye sensitizer)
IT 12707-52-7, FC431
RL: DEV (Device component use); USES (Uses)
(water repellent; heat-sensitive pos. lithog. printing plate precursor
containing IR absorbing dye with perfluoroalkyl
substituent) ,

L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:56566 CAPLUS
DN 138:129026
ED Entered STN: 24 Jan 2003
TI IR-sensitive positive-working lithographic plates containing
(meth)acrylate polymers having perfluoroalkyl groups
IN Kawachi, Ikuo
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-095
ICS B41N001-14; G03F007-00; G03F007-033
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 38

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003021907	A2	20030124	JP 2001-208085	20010709
	US 2003129532	A1	20030710	US 2002-190545	20020709
PRAI	JP 2001-208085	A	20010709		
	JP 2001-212309	A	20010712		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003021907	ICM	G03F007-095
	ICS	B41N001-14; G03F007-00; G03F007-033
US 2003129532	ECLA	B41C001/10A

AB The lithog. plate has a hydrophilic support and ≥2 pos.-working
recording layers which contains water-insol. and alkali-soluble resins and
IR absorbers and shows increased solubility in alkaline solution by
irradiation with IR, and the recording layer contains polymers prepared from
(meth)acrylate monomers containing 2-3 perfluoroalkyl groups. The
lithog. plate has wide development latitude.

ST IR sensitive lithog plate perfluoroalkyl contg acrylate polymer
IT Optical materials

(IR absorbers; IR-sensitive pos.-working lithog.
plates containing (meth)acrylate polymers having perfluoroalkyl
groups in recording layer)
IT IR materials
(absorbers; IR-sensitive pos.-working lithog. plates containing
(meth)acrylate polymers having perfluoroalkyl groups in
recording layer)

STN search for 10765,797

IT Lithographic plates
(presensitized, pos.-working; IR-sensitive pos.-working lithog. plates containing (meth)acrylate polymers having **perfluoroalkyl** groups in recording layer)

IT 279681-09-3P 490023-89-7P 490023-91-1P 490023-92-2P 490023-94-4P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(IR-sensitive pos.-working lithog. plates having recording layer containing **perfluoroalkyl** (meth)acrylate polymers)

L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:246520 CAPLUS
DN 134:271319
ED Entered STN: 06 Apr 2001
TI Synthesis and formulation of contrast agents for near-infrared imaging containing perfluoroalkyl compounds
IN Licha, Kai; Becker, Andreas; Riefke, Bjorn; Platzek, Johannes
PA Institut fur Diagnostikforschung G.m.b.H. an der Freien Universitat Berlin, Germany
SO Eur. Pat. Appl., 44 pp.
CODEN: EPXXDW
DT Patent
LA German
IC ICM A61K049-00
ICS A61K041-00
CC 63-8 (Pharmaceuticals)
Section cross-reference(s): 8, 9

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1088559	A2	<u>20010404</u>	EP 2000-250324	20000928
	EP 1088559	A3	20021002		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	DE 19948650	A1	20010719	DE 1999-19948650	19990929
	US 6447749 ✓	B1	<u>20020910</u>	US 2000-672051	20000929
	US 2003095924	A1	20030522	US 2002-193187	20020712
PRAI	DE 1999-19948650	A	19990929		
	US 1999-158306P	P	19991008		
	US 2000-672051	A3	20000929		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1088559	ICM	A61K049-00
	ICS	A61K041-00
EP 1088559	ECLA	A61K049/00P4F
DE 19948650	ECLA	A61K049/00P4F
US 6447749	ECLA	A61K049/00P4F
US 2003095924	ECLA	A61K049/00P4F

AB The invention concerns galenic formulations to be used as contrast agents for imaging that contain perfluoroalkyl-containing dyes and other **perfluoroalkyl** compds. The contrasts agents are used in near-IR, X-ray, ultrasound, and nuclear magnetic imaging of lymph nodes and blood-pools. The synthesis of **perfluoroalkyl** dyes, other **perfluoroalkyl** derivs. and their gadolinium complexes are described along with formulations. Thus a near-IR contrast agent was prepared that contained 5 mol% of PAR8 and 95 mol% PAR23 and used for the NIR-imaging of guinea-pig lymph node.

ST contrast agent galenic soln NIR imaging **perfluoroalkyl** dye lymph
IT Imaging

STN search for 10765,797

(IR, near-IR; synthesis and formulation of contrast agents for near-IR imaging containing **perfluoroalkyl** compds.)

IT Imaging
(NMR; synthesis and formulation of contrast agents for near-IR imaging containing **perfluoroalkyl** compds.)

IT Imaging
(acoustic; synthesis and formulation of contrast agents for near-IR imaging containing **perfluoroalkyl** compds.)

IT Imaging agents
(contrast; synthesis and formulation of contrast agents for near-IR imaging containing **perfluoroalkyl** compds.)

IT Imaging
(fluorescent; synthesis and formulation of contrast agents for near-IR imaging containing **perfluoroalkyl** compds.)

IT Dyes
(near-IR-absorbing; synthesis and formulation of contrast agents for near-IR imaging containing **perfluoroalkyl** compds.)

IT Lymph node
(neoplasm, metastasis; synthesis and formulation of contrast agents for near-IR imaging containing **perfluoroalkyl** compds.)

IT Dyes
Imaging
Lymph node
(synthesis and formulation of contrast agents for near-IR imaging containing **perfluoroalkyl** compds.)

IT Imaging
(x-ray; synthesis and formulation of contrast agents for near-IR imaging containing **perfluoroalkyl** compds.)

IT 3458-28-4, D-Mannopyranose 5299-60-5 30670-30-5 54136-26-4
81123-85-5 137692-98-9 154160-07-3 193529-61-2 208252-78-2
245106-00-7 296239-18-4 332135-72-5 332135-88-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis and formulation of contrast agents for near-IR imaging containing **perfluoroalkyl** compds.)

IT 604-68-2P 25941-03-1P 296239-17-3P 296239-19-5P 296239-20-8P
332135-68-9P 332135-69-0P 332135-70-3P 332135-71-4P 332135-86-1P
332135-87-2P 332135-90-7P 332135-91-8P 332135-92-9P 332135-93-0P
332135-95-2P 332135-96-3P 332135-97-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and formulation of contrast agents for near-IR imaging containing **perfluoroalkyl** compds.)

IT 216699-35-3P 332135-82-7P 332135-83-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis and formulation of contrast agents for near-IR imaging containing **perfluoroalkyl** compds.)

IT 193528-81-3P 193528-86-8P 193529-44-1P 193529-46-3P 220056-94-0P
220056-99-5P 296238-91-0P 296238-92-1P 296238-94-3P 296238-97-6P
332135-73-6P 332135-74-7P 332135-75-8P 332135-76-9P 332135-77-0P
332135-78-1P 332135-79-2P 332135-80-5P 332135-85-0P 332135-89-4P
332135-94-1P 332135-98-5P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(synthesis and formulation of contrast agents for near-IR imaging containing **perfluoroalkyl** compds.)

L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:665415 CAPLUS
DN 131:287850

STN search for 10765,797

ED Entered STN: 19 Oct 1999
TI Multifunctional transfer materials for display front panels
IN Kawabata, Norio
PA Oike Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G09F009-00
ICS G09F009-00; B32B027-30; G02B001-11; G02B001-10
CC 42-11 (Coatings, Inks, and Related Products)
Section cross-reference(s): 73, 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11288225	A2	19991019	JP 1998-106914	19980402
	JP 3513009	B2	20040331		
PRAI	JP 1998-106914		19980402		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 11288225	ICM	G09F009-00
	ICS	G09F009-00; B32B027-30; G02B001-11; G02B001-10

AB The materials, showing antisoiling, antireflective, electromagnetic wave- and near IR-shielding properties, etc., comprise release films, F-containing hard coating layers showing low refractive index, metal oxide hard coating layers showing high refractive index and elec. conductivity, and adhesive layers, laminated in this order. Thus, a polyester film was successively coated with a solution containing acrylate-terminated **perfluoroalkylene** group-containing Si compound and a solution containing urethane acrylate, Sn oxide, TiO₂, and ZrO₂, successively covered with ITO, Ag-Au alloy, and ITO, and further coated with an EVA primer and a near-**IR absorber** -containing acrylic adhesive to give a transfer material, which was applied on an acrylic plate to show light transmittance 73%, light reflection 1.0%, pencil hardness 4H, good scratch resistance, electromagnetic wave shielding, and near IR transmittance (900-1200 nm) 1-3%.

ST display front panel transfer hard coating; perfluoro organosilicon hard coating display panel; oxide hard coating display front panel

IT Optical materials
Optical materials

(**IR absorbers**, near-**IR absorbers**

; multifunctional transfer materials for display front panels)

IT IR materials
IR materials

(**absorbers**, near-**IR absorbers**; multifunctional transfer materials for display front panels)

IT Polyurethanes, uses

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(acrylic, elec. conductive coating; multifunctional transfer materials for display front panels)

IT Fluoropolymers, uses

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(acrylic, hard coating; multifunctional transfer materials for display front panels)

IT Acrylic polymers, uses

RL: PRP (Properties); TEM (Technical or engineered material use); USES

STN search for 10765,797

(Uses)
(adhesives; multifunctional transfer materials for display front panels)

IT Coating materials
(antisoiling; multifunctional transfer materials for display front panels)

IT Oxides (inorganic), uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(elec. conductive coating; multifunctional transfer materials for display front panels)

IT Coating materials
(elec. conductive; multifunctional transfer materials for display front panels)

IT Antireflective films
Electromagnetic shields
Optical imaging devices
Transfers
(multifunctional transfer materials for display front panels)

IT Acrylic polymers, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(polyurethane-, elec. conductive coating; multifunctional transfer materials for display front panels)

IT Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(release films; multifunctional transfer materials for display front panels)

IT 1314-23-4, Zirconium oxide, uses 1332-29-2, Tin oxide 13463-67-7, Titanium oxide, uses 50926-11-9, ITO
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(elec. conductive coating; multifunctional transfer materials for display front panels)

IT 79-10-7D, Acrylic acid, esters, **perfluoroalkylene-** and Si-containing, polymers
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(hard coating; multifunctional transfer materials for display front panels)

IT 12677-21-3
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(multifunctional transfer materials for display front panels)

IT 24937-78-8, EVA
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(primer; multifunctional transfer materials for display front panels)

L4 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:599872 CAPLUS
DN 129:209370
ED Entered STN: 22 Sep 1998
TI Thermal-transfer printing using transfer medium including IR irradiating unit and printer therefor
IN Akiyama, Keiichi
PA Alps Electric Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent

STN search for 10765,797

LA Japanese
IC ICM B41J002-325
ICS B41J002-32; B41M005-30
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10244697	A2	19980914	JP 1997-49048	19970304
PRAI	JP 1997-49048		19970304		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
------------	-------	------------------------------------

JP 10244697	ICM	B41J002-325
	ICS	B41J002-32; B41M005-30

AB The claimed printer has a transfer medium of an IR-transmitting cylinder including an IR-irradiating unit in its inside, where the heat-melttable ink layer on the medium is heated by the heater via the cylinder wall to be kept at a proper temperature for re-transfer. A printing method using the printer is also claimed.

ST thermal transfer printer ink temp control; IR irradiating heater thermal transfer printer

IT Dyes

(**IR-absorbing**, ink layer containing; thermal-transfer printer containing transfer medium including IR heater for temperature control of ink layer)

IT Electric lamps

(IR-irradiating; thermal-transfer printer containing transfer medium including IR heater for temperature control of ink layer)

IT Fluoropolymers, uses

RL: DEV (Device component use); USES (Uses)

(**perfluoroalkyl** vinyl ether-based, release layer of transfer medium; thermal-transfer printer containing transfer medium including IR heater for temperature control of ink layer)

IT Thermal-transfer printers

(thermal-transfer printer containing transfer medium including IR heater for temperature control of ink layer)

IT 60676-86-0, Vitreous silica

RL: DEV (Device component use); USES (Uses)

(transfer medium; thermal-transfer printer containing transfer medium including IR heater for temperature control of ink layer)

L4 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1996:241556 CAPLUS

DN 124:274105

ED Entered STN: 25 Apr 1996

TI Polyimide resin compositions for optical filters

IN Takuma, Keisuke; Seino, Kazuhiro; Misawa, Tsutami; Tamai, Shoji; Yamashita, Watara

PA Mitsui Toatsu Chemicals, Inc., Japan

SO Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM G02B005-20

ICS C08G073-10; C08K005-00

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 38, 41, 42

STN search for 10765,797

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 695955	A2	19960207	EP 1995-305396	19950802
	EP 695955	A3	19970122		
	R: DE, FR, GB				
	JP 08100122	A2	19960416	JP 1995-184012	19950720
	KR 200199	B1	19990615	KR 1995-23072	19950729
	US 5916488	A	19990629	US 1998-66808	19980428
PRAI	JP 1994-181323	A	19940802		
	US 1995-509824	B1	19950801		
	US 1997-965195	A3	19971106		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 695955	ICM	G02B005-20
	ICS	C08G073-10; C08K005-00
EP 695955	ECLA	C08G073/10F; C08K005/00P4+L79/08; C09D011/10D; G02B005/20A; G02B005/22D
US 5916488	ECLA	C08G073/10F; C09D011/10D; G02B005/20A
AB		Polyimide resin compns. for an optical filter comprise a colorless transparent polyimide resin containing at least one perfluoroalkyl group in each recurring structural unit and at least one dye soluble in said resin, said dye having absorption in the visible range and/or the near IR range. A printing ink for an optical filter, comprising the polyimide resin composition and a solvent; and an optical filter comprising a transparent base material and the polyimide resin composition are also described.
ST		ink optical filter polyimide resin dye
IT		Inks
		Optical filters
		(dye-containing polyimide resin compns. for optical filters)
IT		Polyimides, uses
		RL: DEV (Device component use); POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
		(dye-containing polyimide resin compns. for optical filters)
IT		Optical filters
		(IR, dye -containing polyimide resin compns. for optical filters)
IT		Polyimides, uses
		RL: DEV (Device component use); POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
		(fluorine-containing, dye-containing polyimide resin compns. for optical filters)
IT		Polyimides, uses
		RL: DEV (Device component use); POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
		(polyether-, fluorine-containing, dye-containing polyimide resin compns. for optical filters)
IT		Fluoropolymers
		RL: DEV (Device component use); POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
		(polyether-polyimide-, dye-containing polyimide resin compns. for optical filters)
IT		Fluoropolymers
		RL: DEV (Device component use); POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
		(polyimide-, dye-containing polyimide resin compns. for optical filters)
IT		Polyethers, uses
		Polyketones
		RL: DEV (Device component use); POF (Polymer in formulation); TEM

STN search for 10765,797

(Technical or engineered material use); USES (Uses)
(polyimide-, fluorine-containing, dye-containing polyimide resin compns. for optical filters)

IT Fluoropolymers
RL: DEV (Device component use); POF (Polymer in formulation); TEM
(Technical or engineered material use); USES (Uses)
(polyimide-polyketone-, dye-containing polyimide resin compns. for optical filters)

IT Polyimides, uses
RL: DEV (Device component use); POF (Polymer in formulation); TEM
(Technical or engineered material use); USES (Uses)
(polyketone-, fluorine-containing, dye-containing polyimide resin compns. for optical filters)

IT 154734-07-3P 154734-39-1P 154734-40-4P 155215-07-9P 169324-23-6P
169324-24-7P
RL: DEV (Device component use); POF (Polymer in formulation); SPN
(Synthetic preparation); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(dye-containing polyimide resin compns. for optical filters)

IT 116322-82-8 129197-26-8 129197-27-9 129219-42-7 129219-43-8
147613-95-4 151483-45-3 151514-95-3 154734-13-1 154734-19-7
154734-20-0 155311-16-3 163425-31-8 163425-35-2 175596-37-9
175596-38-0 175596-40-4 175596-41-5 175596-42-6 175596-43-7
175596-44-8 175596-45-9 175596-46-0 175596-48-2
RL: DEV (Device component use); POF (Polymer in formulation); TEM
(Technical or engineered material use); USES (Uses)
(dye-containing polyimide resin compns. for optical filters)

=> file uspatfull

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	64.62	64.83
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-5.11	-5.11

FILE 'USPATFULL' ENTERED AT 18:19:18 ON 23 FEB 2005
CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 22 Feb 2005 (20050222/PD)
FILE LAST UPDATED: 22 Feb 2005 (20050222/ED)
HIGHEST GRANTED PATENT NUMBER: US6859937
HIGHEST APPLICATION PUBLICATION NUMBER: US2005039239
CA INDEXING IS CURRENT THROUGH 22 Feb 2005 (20050222/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 22 Feb 2005 (20050222/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Dec 2004
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Dec 2004

>>> USPAT2 is now available. USPATFULL contains full text of the <<<
>>> original, i.e., the earliest published granted patents or <<<
>>> applications. USPAT2 contains full text of the latest US <<<
>>> publications, starting in 2001, for the inventions covered in <<<
>>> USPATFULL. A USPATFULL record contains not only the original <<<
>>> published document but also a list of any subsequent <<<
>>> publications. The publication number, patent kind code, and <<<
>>> publication date for all the US publications for an invention <<<
>>> are displayed in the PI (Patent Information) field of USPATFULL <<<

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>>> records and may be searched in standard search fields, e.g., /PN, <<<
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>>> enter this cluster. <<<

>>> Use USPATALL when searching terms such as patent assignees, <<<
>>> classifications, or claims, that may potentially change from <<<
>>> the earliest to the latest publication. <<<

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> d his

(FILE 'HOME' ENTERED AT 18:16:16 ON 23 FEB 2005)

FILE 'CAPLUS' ENTERED AT 18:16:33 ON 23 FEB 2005

L1 0 S PERFLOURO? AND (IR OR INFRARED OR INFRA RED) (W) (ABSORB? OR
L2 0 S L1 AND LITHOGRAPH?
L3 0 S PERFLOUROALKYL? AND (IR OR INFRARED OR INFRA RED) (W) (ABSORB
L4 7 S PERFLUROALKYL? AND (IR OR INFRARED OR INFRA RED) (W) (ABSORB

FILE 'USPATFULL' ENTERED AT 18:19:18 ON 23 FEB 2005

=> s l4

15880 PERFLUROALKYL?
123015 IR
193850 INFRARED
56161 INFRA
303456 RED
31011 INFRA RED
(INFRA(W) RED)
586847 ABSORB?
147761 DYE
6103 (IR OR INFRARED OR INFRA RED) (W) (ABSORB? OR DYE)
L5 386 PERFLUROALKYL? AND (IR OR INFRARED OR INFRA RED) (W) (ABSORB?
OR DYE)

=> s perfluoroalkyl? (a) (ir or infrared or infra red) (w) (absorb? or dye)

15880 PERFLUROALKYL?
123015 IR
193850 INFRARED
56161 INFRA
303456 RED
31011 INFRA RED
(INFRA(W) RED)
586847 ABSORB?
147761 DYE
L6 0 PERFLUROALKYL? (A) (IR OR INFRARED OR INFRA RED) (W) (ABSORB?
OR DYE)

=>

=> help

The arrow (=>) is the system prompt, where you enter a command. For
an explanation of system commands, files, formats, etc., enter "HELP"
and the name of the item you want explained at an arrow prompt (=>).
Enter "HELP COMMANDS" for a list of commands that can be used in this

STN search for 10765,797

file. Enter "HELP MESSAGES" for a list of online explanations that are available. The "?" can be used as a synonym for "HELP".

Help is also available at any prompt, and after any error message. Enter "HELP" or "?" at a prompt to see an explanation of the options. After an error message, enter "HELP" or "?" at the next prompt and you will receive a more detailed explanation of the error and how to correct it.

Automatic help is also available. When AUHELP is 'ON', you will automatically receive help following an error message. For more information on AUHELP, enter "HELP SET AUHELP" at an arrow prompt (=>).

Users who need additional assistance can contact the Help Desk at their nearest STN Service Center. Enter "HELP STN" for information on STN Service Centers. You may also choose to contact the database representative for the file you are searching, for more detailed help on database content and search strategy. For information on how to contact database representatives for the current file, enter "HELP DESK" at an arrow prompt (=>).

=> help commands

Enter one of these commands at the arrow prompt (=>).

ACTIVATE ----- Assign L#s to saved query or answer set.
ANALYZE ----- Build expand terms from answer fields.
ARCHIVE ----- Purchase rights for archiving.
DELETE ----- Delete saved or current session items.
DISPLAY ----- Display saved or current session items.
DUPLICATE ----- Determine duplicate answers
EDIT ----- Modify the text of an E-number entry.
EXPAND ----- Look at the index around a term.
FILE ----- Specify the search and display file.
FOCUS ----- Rank answers in order of relevancy.
FSEARCH ----- Find records from given patent family(s)
FSORT ----- Sort patent records by patent family
HELP ----- For help on how to use the system.
INDEX ----- Specify the Index environment.
LOGOFF ----- End the online session.
NEWS ----- Display current news about the system.
ORDER ----- Order an original document or copy.
PRINT ----- Print answers offline.
QUERY ----- Define a search question (query).
REDISTRIBUTE - Purchase rights for redistribution.
SAVE ----- Save an L-numbered query or answer set.
SDI ----- Request searches be run on file updates.
SEARCH ----- Perform a search.
SELECT ----- Build expand terms from answer fields.
SET ----- Set terminal and interaction options.
SORT ----- Sort Answers of an L-number list
TABULATE ----- Analyze SmartSELECT L-number data.
TRANSFER ----- Extract terms from answers and search.
? ----- The same as HELP.

Enter one of these commands at the arrow prompt (=>).

For more detailed information about a command, enter HELP followed by the command name at an arrow prompt.

STN search for 10765,797

Example: => HELP SEARCH

For information on entering multiple commands at a single arrow prompt, enter HELP COMMAND STACKING.

=> d his

(FILE 'HOME' ENTERED AT 18:16:16 ON 23 FEB 2005)

FILE 'CAPLUS' ENTERED AT 18:16:33 ON 23 FEB 2005

L1 0 S PERFLOURO? AND (IR OR INFRARED OR INFRA RED) (W) (ABSORB? OR
L2 0 S L1 AND LITHOGRAPH?
L3 0 S PERFLOUROALKYL? AND (IR OR INFRARED OR INFRA RED) (W) (ABSORB
L4 7 S PERFLUROALKYL? AND (IR OR INFRARED OR INFRA RED) (W) (ABSORB

FILE 'USPATFULL' ENTERED AT 18:19:18 ON 23 FEB 2005

L5 386 S L4
L6 0 S PERFLUROALKYL? (A) (IR OR INFRARED OR INFRA RED) (W) (ABSORB

=> d his

(FILE 'HOME' ENTERED AT 18:16:16 ON 23 FEB 2005)

FILE 'CAPLUS' ENTERED AT 18:16:33 ON 23 FEB 2005

L1 0 S PERFLOURO? AND (IR OR INFRARED OR INFRA RED) (W) (ABSORB? OR
L2 0 S L1 AND LITHOGRAPH?
L3 0 S PERFLOUROALKYL? AND (IR OR INFRARED OR INFRA RED) (W) (ABSORB
L4 7 S PERFLUROALKYL? AND (IR OR INFRARED OR INFRA RED) (W) (ABSORB

FILE 'USPATFULL' ENTERED AT 18:19:18 ON 23 FEB 2005

L5 386 S L4
L6 0 S PERFLUROALKYL? (A) (IR OR INFRARED OR INFRA RED) (W) (ABSORB

=> log y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	4.20	69.03
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-5.11

STN INTERNATIONAL LOGOFF AT 18:20:57 ON 23 FEB 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptau156cxh

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

STN search for 10765,797

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 SEP 01 New pricing for the Save Answers for SciFinder Wizard within
STN Express with Discover!
NEWS 4 OCT 28 KOREAPAT now available on STN
NEWS 5 NOV 30 PHAR reloaded with additional data
NEWS 6 DEC 01 LISA now available on STN
NEWS 7 DEC 09 12 databases to be removed from STN on December 31, 2004
NEWS 8 DEC 15 MEDLINE update schedule for December 2004
NEWS 9 DEC 17 ELCOM reloaded; updating to resume; current-awareness
alerts (SDIs) affected
NEWS 10 DEC 17 COMPUAB reloaded; updating to resume; current-awareness
alerts (SDIs) affected
NEWS 11 DEC 17 SOLIDSTATE reloaded; updating to resume; current-awareness
alerts (SDIs) affected
NEWS 12 DEC 17 CERAB reloaded; updating to resume; current-awareness
alerts (SDIs) affected
NEWS 13 DEC 17 THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB
NEWS 14 DEC 30 EPFULL: New patent full text database to be available on STN
NEWS 15 DEC 30 CAPLUS - PATENT COVERAGE EXPANDED
NEWS 16 JAN 03 No connect-hour charges in EPFULL during January and
February 2005
NEWS 17 JAN 26 CA/CAPLUS - Expanded patent coverage to include the Russian
Agency for Patents and Trademarks (ROSPATENT)
NEWS 18 FEB 10 STN Patent Forums to be held in March 2005
NEWS 19 FEB 16 STN User Update to be held in conjunction with the 229th ACS
National Meeting on March 13, 2005

NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

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=> file reg		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 18:30:26 ON 23 FEB 2005
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STN search for 10765,797

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STRUCTURE FILE UPDATES: 22 FEB 2005 HIGHEST RN 835870-69-4

DICTIONARY FILE UPDATES: 22 FEB 2005 HIGHEST RN 835870-69-4

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> s perfluoro? and squarylium

6125 PERFLUORO?

2 SQUARYLIUM

L1 0 PERFLUORO? AND SQUARYLIUM

=> s perfluoro? and croconate

6125 PERFLUORO?

24 CROCONATE

L2 0 PERFLUORO? AND CROCONATE

=> s perfluoro? and merocyanin?

6125 PERFLUORO?

35 MEROCYANIN?

L3 0 PERFLUORO? AND MEROCYANIN?

=> s perfluoro? and cyanin?

6125 PERFLUORO?

28570 CYANIN?

L4 8 PERFLUORO? AND CYANIN?

=> d 1-8

L4 ANSWER 1 OF 8 REGISTRY COPYRIGHT 2005 ACS on STN

RN 167899-91-4 REGISTRY

CN Lutetium, bis[2,9,16,23-tetrakis[2,2,2-trifluoro-1,1-bis(trifluoromethyl)ethyl]-29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32] - (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Bis(tetra-perfluoro-tert-butylphthalocyaninato)lutetium

MF C96 H24 F72 Lu N16

CI CCS

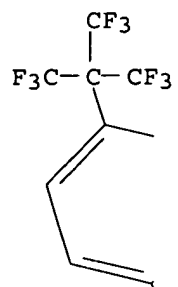
SR CA

LC STN Files: CA, CAPLUS

DT.CA Caplus document type: Journal

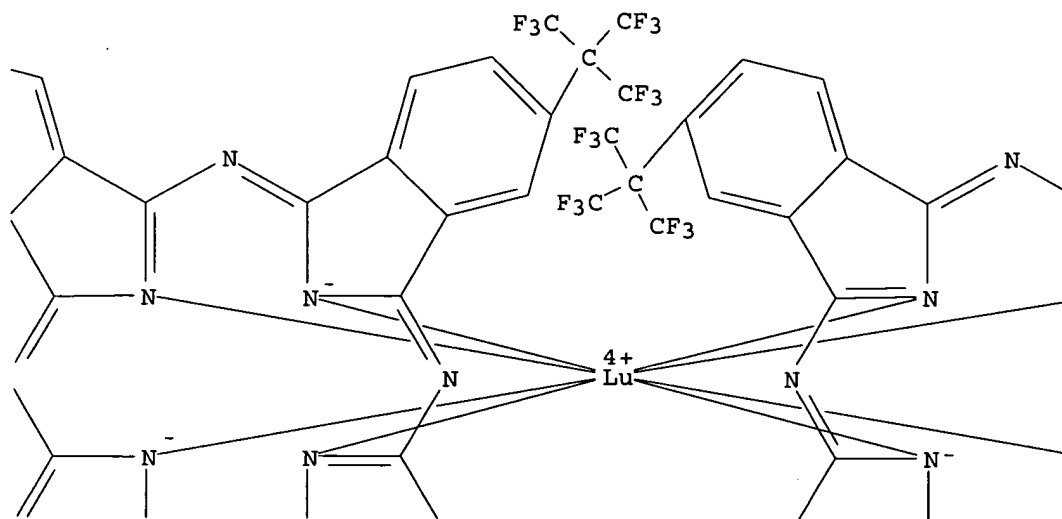
RL.NP Roles from non-patents: PREP (Preparation)

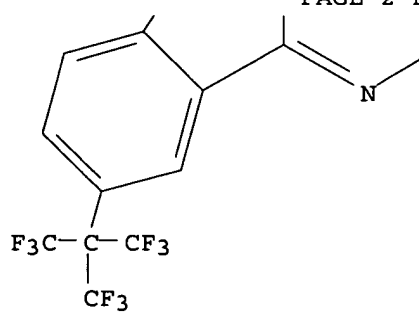
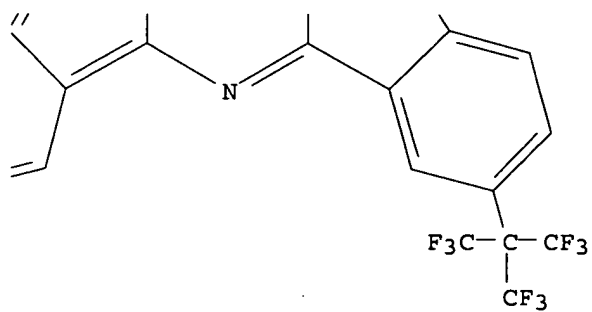
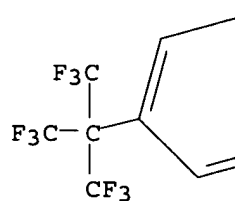
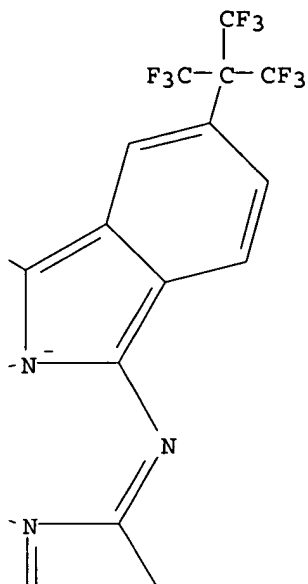
PAGE 1-A

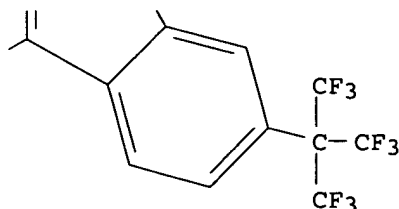


N

PAGE 1-B







1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 2 OF 8 REGISTRY COPYRIGHT 2005 ACS on STN
RN 61105-64-4 REGISTRY
CN Benzothiazolium, 3-ethyl-2-[3-(3-ethyl-2(3H)-benzothiazolylydene)-1-propenyl]-, salt with heptafluorobutanoic acid (1:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Butanoic acid, heptafluoro-, ion(1-), 3-ethyl-2-[3-(3-ethyl-2(3H)-benzothiazolylydene)-1-propenyl]benzothiazolium (9CI)

OTHER NAMES:

CN **3,3'-Diethylthiacarbocyanine perfluorobutyrate** ✓

MF C21 H21 N2 S2 . C4 F7 O2

LC STN Files: CA, CAPLUS

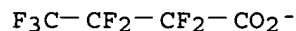
DT.CA Caplus document type: Journal

RL.NP Roles from non-patents: PRP (Properties)

CM 1

CRN 45048-62-2

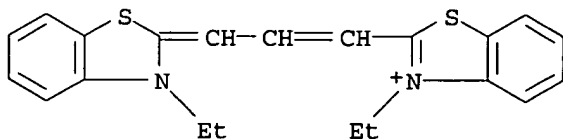
CMF C4 F7 O2



CM 2

CRN 18403-49-1

CMF C21 H21 N2 S2



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 3 OF 8 REGISTRY COPYRIGHT 2005 ACS on STN
RN 61105-63-3 REGISTRY
CN Benzoselenazolium, 3-methyl-2-[3-(3-methyl-2(3H)-benzoselenazolylydene)-2-phenyl-1-propenyl]-, salt with heptafluorobutanoic acid (1:1) (9CI) (CA

STN search for 10765,797

INDEX NAME)

OTHER CA INDEX NAMES:

CN Butanoic acid, heptafluoro-, ion(1-), 3-methyl-2-[3-(3-methyl-2(3H)-benzoselenazolylidene)-2-phenyl-1-propenyl]benzoselenazolium (9CI)

OTHER NAMES:

CN **3,3'-Dimethyl-9-phenylselenacarbocyanine perfluorobutyrate**

MF C25 H21 N2 Se2 . C4 F7 O2

LC STN Files: CA, CAPLUS

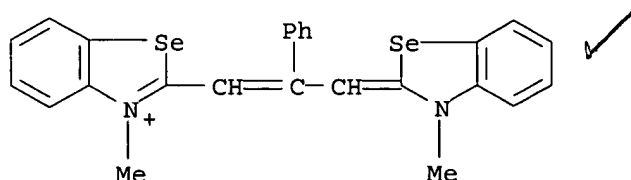
DT.CA Caplus document type: Journal

RL.NP Roles from non-patents: PRP (Properties)

CM 1

CRN 61105-62-2

CMF C25 H21 N2 Se2



CM 2

CRN 45048-62-2

CMF C4 F7 O2

$\text{F}_3\text{C}-\text{CF}_2-\text{CF}_2-\text{CO}_2^-$

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 4 OF 8 REGISTRY COPYRIGHT 2005 ACS on STN

RN 61105-61-1 REGISTRY

CN Benzothiazolium, 3-ethyl-2-[3-(3-ethyl-2(3H)-benzothiazolylidene)-2-phenyl-1-propenyl]-, salt with heptafluorobutanoic acid (1:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Butanoic acid, heptafluoro-, ion(1-), 3-ethyl-2-[3-(3-ethyl-2(3H)-benzothiazolylidene)-2-phenyl-1-propenyl]benzothiazolium (9CI)

OTHER NAMES:

CN **3,3'-Diethyl-9-phenylthiacarbocyanine perfluorobutyrate**

MF C27 H25 N2 S2 . C4 F7 O2

LC STN Files: CA, CAPLUS

DT.CA Caplus document type: Journal

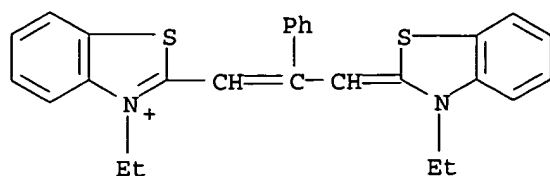
RL.NP Roles from non-patents: PRP (Properties)

CM 1

CRN 54710-13-3

CMF C27 H25 N2 S2

STN search for 10765,797



CM 2

CRN 45048-62-2

CMF C4 F7 O2

F₃C-CF₂-CF₂-CO₂⁻

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 5 OF 8 REGISTRY COPYRIGHT 2005 ACS on STN

RN 61105-60-0 REGISTRY

CN Benzoselenazolium, 3-ethyl-2-[3-(3-ethyl-2(3H)-benzoselenazolylidene)-2-methyl-1-propenyl]-, salt with heptafluorobutanoic acid (1:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Butanoic acid, heptafluoro-, ion(1-), 3-ethyl-2-[3-(3-ethyl-2(3H)-benzoselenazolylidene)-2-methyl-1-propenyl]benzoselenazolium (9CI)

OTHER NAMES:

CN **3,3'-Diethyl-9-methylselenacarbocyanine perfluorobutyrate**

MF C22 H23 N2 Se2 . C4 F7 O2

LC STN Files: CA, CAPLUS

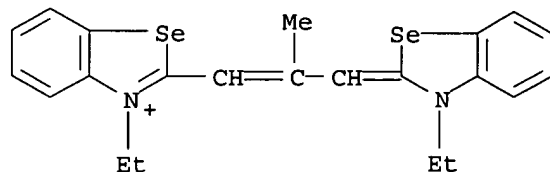
DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: PRP (Properties)

CM 1

CRN 61105-59-7

CMF C22 H23 N2 Se2



CM 2

CRN 45048-62-2

CMF C4 F7 O2

F₃C-CF₂-CF₂-CO₂⁻

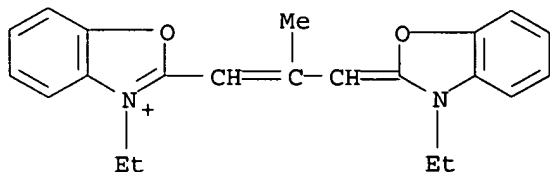
STN search for 10765,797

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 6 OF 8 REGISTRY COPYRIGHT 2005 ACS on STN
RN 61105-58-6 REGISTRY
CN Benzoxazolium, 3-ethyl-2-[3-(3-ethyl-2(3H)-benzoxazolylidene)-2-methyl-1-propenyl]-, salt with heptafluorobutanoic acid (1:1) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Butanoic acid, heptafluoro-, ion(1-), 3-ethyl-2-[3-(3-ethyl-2(3H)-benzoxazolylidene)-2-methyl-1-propenyl]benzoxazolium (9CI)
OTHER NAMES:
CN **3,3'-Diethyl-9-methyloxacarbocyanine perfluorobutyrate**
MF C22 H23 N2 O2 . C4 F7 O2
LC STN Files: CA, CAPLUS
DT.CA Caplus document type: Journal
RL.NP Roles from non-patents: PRP (Properties)

CM 1

CRN 61105-57-5
CMF C22 H23 N2 O2



CM 2

CRN 45048-62-2
CMF C4 F7 O2

$\text{F}_3\text{C}-\text{CF}_2-\text{CF}_2-\text{CO}_2^-$

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 7 OF 8 REGISTRY COPYRIGHT 2005 ACS on STN
RN 61105-56-4 REGISTRY
CN Benzothiazolium, 3-ethyl-2-[2-[(3-ethyl-2(3H)-benzothiazolylidene)methyl]-1-butenyl]-, salt with heptafluorobutanoic acid (1:1) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Butanoic acid, heptafluoro-, ion(1-), 3-ethyl-2-[2-[(3-ethyl-2(3H)-benzothiazolylidene)methyl]-1-butenyl]benzothiazolium (9CI)
OTHER NAMES:
CN **3,3',9-Triethylthiacarbocyanine perfluorobutyrate**
DR 116777-30-1
MF C23 H25 N2 S2 . C4 F7 O2
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA Caplus document type: Journal; Patent

STN search for 10765,797

RL.P Roles from patents: USES (Uses)

RL.NP Roles from non-patents: PROC (Process); PRP (Properties); USES (Uses)

CM 1

CRN 45048-62-2

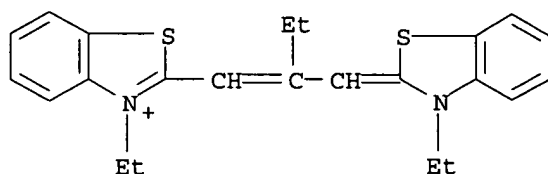
CMF C4 F7 O2

F₃C-CF₂-CF₂-CO₂⁻

CM 2

CRN 35077-88-4

CMF C23 H25 N2 S2



4 REFERENCES IN FILE CA (1907 TO DATE)

4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 8 OF 8 REGISTRY COPYRIGHT 2005 ACS on STN

RN 23844-93-1 REGISTRY

CN Iron, [1,2,3,4,8,9,10,11,15,16,17,18,22,23,24,25-hexadecafluoro-29H,31H-phthalocyaninato(2-)-κN29,κN30,κN31,κN32]-, (SP-4-1)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 29H,31H-Phthalocyanine, 1,2,3,4,8,9,10,11,15,16,17,18,22,23,24,25-hexadecafluoro-, iron complex

CN Iron, [1,2,3,4,8,9,10,11,15,16,17,18,22,23,24,25-hexadecafluoro-29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, (SP-4-1)-

CN Iron, [hexadecafluorophthalocyaninato(2-)]- (8CI)

OTHER NAMES:

CN (Perfluorophthalocyaninato)iron

DR 128653-35-0, 52629-21-7

MF C32 F16 Fe N8

CI CCS

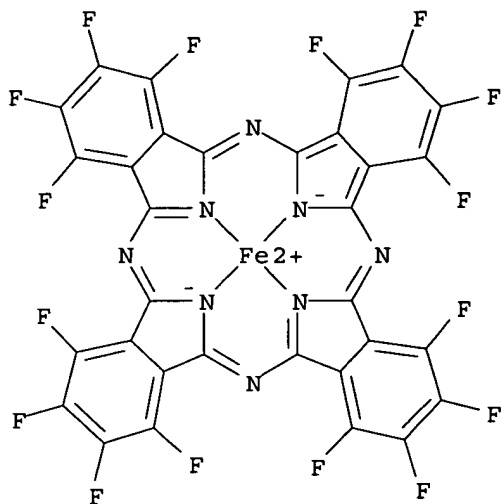
LC STN Files: CA, CAPLUS, CASREACT, USPAT2, USPATFULL

DT.CA Caplus document type: Conference; Journal; Patent

RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

RL.NP Roles from non-patents: PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

STN search for 10765,797



15 REFERENCES IN FILE CA (1907 TO DATE)
15 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d his

(FILE 'HOME' ENTERED AT 18:30:05 ON 23 FEB 2005)

FILE 'REGISTRY' ENTERED AT 18:30:26 ON 23 FEB 2005

L1 0 S PERFLUORO? AND SQUARYLIUM
L2 0 S PERFLUORO? AND CROCONATE
L3 0 S PERFLUORO? AND MEROCYANIN?
L4 8 S PERFLUORO? AND CYANIN?

=> s perfluoro? and indolizin?

6125 PERFLUORO?
41263 INDOLIZIN?

L5 0 PERFLUORO? AND INDOLIZIN?

=> s perfluoro? and pyriliium?

6125 PERFLUORO?
3 PYRILIUM?

L6 0 PERFLUORO? AND PYRILIUM?

=> s perfluoro? and pyrrilium?

6125 PERFLUORO?
0 PYRRILIUM?

L7 0 PERFLUORO? AND PYRRILIUM?

=> s perfluoro? and thiolin?

6125 PERFLUORO?
39 THIOLIN?

L8 0 PERFLUORO? AND THIOLIN?

=> s perfluoro? and dithiolin?

6125 PERFLUORO?
0 DITHIOLIN?

L9 0 PERFLUORO? AND DITHIOLIN?

STN search for 10765,797

=> d his

(FILE 'HOME' ENTERED AT 18:30:05 ON 23 FEB 2005)

FILE 'REGISTRY' ENTERED AT 18:30:26 ON 23 FEB 2005

L1 0 S PERFLUORO? AND SQUARYLIUM
L2 0 S PERFLUORO? AND CROCONATE
L3 0 S PERFLUORO? AND MEROCYANIN?
L4 8 S PERFLUORO? AND CYANIN?
L5 0 S PERFLUORO? AND INDOLIZIN?
L6 0 S PERFLUORO? AND PYRILIUM?
L7 0 S PERFLUORO? AND PYRRILIUM?
L8 0 S PERFLUORO? AND THIOLIN?
L9 0 S PERFLUORO? AND DITHIOLIN?

=> s l4

6125 PERFLUORO?
28570 CYANIN?

L10 8 PERFLUORO? AND CYANIN?

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	108.44	108.65

FILE 'CAPLUS' ENTERED AT 18:32:53 ON 23 FEB 2005

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FILE COVERS 1907 - 23 Feb 2005 VOL 142 ISS 9

FILE LAST UPDATED: 22 Feb 2005 (20050222/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l10

L11 20 L10

=> d all 1-20

L11 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:786673 CAPLUS
DN 141:428190
ED Entered STN: 28 Sep 2004
TI Effects of Peripheral Substituents and Axial Ligands on the Electronic Structure and Properties of Iron Phthalocyanine
AU Liao, Meng-Sheng; Kar, Tapas; Gorun, Sergiu M.; Scheiner, Steve

STN search for 10765,797

CS Department of Chemistry Biochemistry, Utah State University, Logan, UT,
84322-0300, USA

SO Inorganic Chemistry (2004), 43(22), 7151-7161
CODEN: INOCAJ; ISSN: 0020-1669

PB American Chemical Society

DT Journal

LA English

CC 65-5 (General Physical Chemistry)

AB The effects of peripheral substituents and axial ligands on the electronic structure and properties of iron phthalocyanine, H16PcFe, have been investigated using a DFT method. Substitution by electron-withdrawing fluorinated groups alters the ground state of H16PcFe and gives rise to large changes in the ionization potentials and electron affinity. For the six-coordinate adducts with acetone, H₂O, and pyridine, the axial coordination of two weak-field ligands leads to an intermediate-spin ground state, while the strong-field ligands make the system diamagnetic. The electronic configuration of a ligated iron phthalocyanine is determined mainly by the axial ligand-field strength but can also be affected by peripheral substituents. Axial ligands also exert an effect on ionization potentials and electron affinity and can, as observed exptl., even change the site of oxidation/reduction

ST peripheral substituent axial ligand electronic structure property iron phthalocyanine

IT Electron affinity
Electron configuration
Electronic state
Ground state
Ionization potential
Ligand field theory
Molecular structure
(effects of peripheral substituents and axial ligands on electronic structure and properties of iron phthalocyanine)

IT Ligands
Metallophthalocyanines
RL: PRP (Properties)
(effects of peripheral substituents and axial ligands on electronic structure and properties of iron phthalocyanine)

IT 132-16-1, Iron Phthalocyanine 23844-93-1 353302-20-2
796842-72-3 796842-73-4
RL: PRP (Properties)
(effects of peripheral substituents and axial ligands on electronic structure and properties of iron phthalocyanine)

RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD

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STN search for 10765,797

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L11 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:552655 CAPLUS

DN 139:381168

ED Entered STN: 20 Jul 2003

TI Oxygenation of cyclohexene by molecular oxygen using
hexadecafluorophthalocyaninatoiron(III) as an oxidative catalyst

AU Kasuga, Kuninobu; Kobayashi, Mika; Sugimori, Tamotsu; Handa, Makoto
CS Department of Material Science, Faculty of Science and Engineering,
Shimane University, Matsue, Japan

SO Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry (2003),
33(6), 965-970

CODEN: SRIMCN; ISSN: 0094-5714

PB Marcel Dekker, Inc.

STN search for 10765,797

DT Journal
LA English
CC 24-5 (Alicyclic Compounds)
Section cross-reference(s): 27
OS CASREACT 139:381168
AB Oxygenation of cyclohexene by mol. oxygen was performed in dichloroethane using the title complex as an oxidative catalyst. The ketone was mainly produced along with a small amount of the epoxide. A radical-chain mechanism was proposed.
ST oxidn cyclohexene hexadecafluorophthalocyaninatoiron catalyst;
cyclohexenone prepn hexadecafluorophthalocyaninatoiron catalyst;
epoxycyclohexane prepn hexadecafluorophthalocyaninatoiron catalyst
IT Epoxidation catalysts
Oxidation catalysts
(oxygenation of cyclohexene with hexadecafluorophthalocyaninatoiron(III) as catalyst)
IT 23844-93-1
RL: CAT (Catalyst use); USES (Uses)
(oxygenation of cyclohexene with hexadecafluorophthalocyaninatoiron(III) as catalyst)
IT 110-83-8, Cyclohexene, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxygenation of cyclohexene with hexadecafluorophthalocyaninatoiron(III) as catalyst)
IT 286-20-4P, 7-Oxabicyclo[4.1.0]heptane 930-68-7P, 2-Cyclohexen-1-one
RL: SPN (Synthetic preparation); PREP (Preparation)
(oxygenation of cyclohexene with hexadecafluorophthalocyaninatoiron(III) as catalyst)
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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L11 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:155652 CAPLUS
DN 139:84785
ED Entered STN: 02 Mar 2003
TI Chlorinated phthalocyanine iron(II) complex catalyzed oxidation of alkanes and alkenes with molecular oxygen in the presence of acetaldehyde
AU Murahashi, Shun-Ichi; Zhou, Xiang-Ge; Komiya, Naruyoshi
CS Department of Chemistry, Graduate School of Engineering Science, Osaka University, Osaka, 560-8531, Japan
SO Synlett (2003), (3), 321-324
CODEN: SYNLES; ISSN: 0936-5214
PB Georg Thieme Verlag
DT Journal
LA English
CC 21-2 (General Organic Chemistry)

STN search for 10765,797

OS CASREACT 139:84785

AB Chlorinated phthalocyanine iron(II) complex is an excellent catalyst for the oxidation of alkanes and alkenes with mol. oxygen (1 atm) in the presence of acetaldehyde at room temperature. The catalyst can be easily separated and reused for the next reaction.

ST oxidn alkane alkene iron phthalocyanine acetaldehyde

IT Oxidation catalysts

(chlorinated phthalocyanine iron(II) complex catalyzed oxidation of alkanes and alkenes with mol. oxygen in presence of acetaldehyde)

IT Hydrocarbons, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(chlorinated phthalocyanine iron(II) complex catalyzed oxidation of alkanes and alkenes with mol. oxygen in presence of acetaldehyde)

IT 132-16-1 147-14-8 3317-67-7 14055-02-8 14285-56-4 14325-24-7
23844-93-1 26603-20-3 50662-67-4 52629-20-6 118402-44-1
554429-77-5

RL: CAT (Catalyst use); USES (Uses)

(chlorinated phthalocyanine iron(II) complex catalyzed oxidation of alkanes and alkenes with mol. oxygen in presence of acetaldehyde)

IT 110-54-3, Hexane, reactions 110-82-7, Cyclohexane, reactions 110-83-8, Cyclohexene, reactions 281-23-2, Adamantane 496-11-7, Indan

RL: RCT (Reactant); RACT (Reactant or reagent)

(chlorinated phthalocyanine iron(II) complex catalyzed oxidation of alkanes and alkenes with mol. oxygen in presence of acetaldehyde)

IT 75-07-0, Acetaldehyde, reactions

RL: RGT (Reagent); RACT (Reactant or reagent)

(chlorinated phthalocyanine iron(II) complex catalyzed oxidation of alkanes and alkenes with mol. oxygen in presence of acetaldehyde)

IT 83-33-0P, 1-Indanone 108-93-0P, Cyclohexanol, preparation 108-94-1P, Cyclohexanone, preparation 286-20-4P, 7-Oxabicyclo[4.1.0]heptane 589-38-8P, 3-Hexanone 591-78-6P, 2-Hexanone 623-37-0P, 3-Hexanol 626-93-7P, 2-Hexanol 700-57-2P, 2-Adamantanol 700-58-3P, 2-Adamantanone 768-95-6P, 1-Adamantanol 822-67-3P, 2-Cyclohexen-1-ol 930-68-7P, 2-Cyclohexen-1-one 6351-10-6P, 1-Indanol

RL: SPN (Synthetic preparation); PREP (Preparation)

(chlorinated phthalocyanine iron(II) complex catalyzed oxidation of alkanes and alkenes with mol. oxygen in presence of acetaldehyde)

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L11 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:829685 CAPLUS

DN 136:135067

ED Entered STN: 15 Nov 2001

TI Energetics of electron-transfer reactions of photoinitiated polymerization: dye-sensitized fragmentation of N-alkoxypyridinium salts

AU Gould, Ian R.; Shukla, Deepak; Giesen, David; Farid, Samir

CS Department of Chemistry and Biochemistry, Arizona State University, Tempe, AZ, 85287, USA

SO Helvetica Chimica Acta (2001), 84(9), 2796-2812

CODEN: HCACAV; ISSN: 0018-019X

PB Verlag Helvetica Chimica Acta

DT Journal

LA English

CC 35-3 (Chemistry of Synthetic High Polymers)

AB Electron transfer from excited dyes to N-alkoxypyridinium salts leads to reductive cleavage of the N-O bond to give an alkoxy radical that can be used to initiate polymerization The bond-dissociation energy (BDE) obtained from

calcs. based on d.-functional theory were in agreement with predictions from a thermochem. cycle. These data show a difference of ca. 290-315 kJ/mol between the BDE of the pyridinium and that of the pyridyl radical and indicate that the fragmentation of the radical is highly exothermic. The energetic requirements for the photochem. electron transfer are discussed in terms of a simplified model that shows that the initiation efficiency of the radical polymerization can be correlated with a single parameter, the reduction potential of the sensitizing dye. Dyes, including cyanine, styrylpyridinium, rhodamine, squarylium, coumarin, oxanol, with absorption bands spanning the entire visible region were effective in initiating photopolymerization of acrylate monomers in this system. The photoresponse can be doubled through coupling of the reductive cleavage of the N-alkoxypyridinium with oxidative cleavage of the C-B bond of an alkyltriarylborate, a process that utilizes the chemical potential stored in the oxidized dye following electron transfer to the pyridinium salt.

ST dye photoexcitation bond cleavage radical electron transfer; initiator radical polymer dye fragmentation alkoxypyridinium salt; bond dissociation energy radical polymer alkoxypyridinium initiator

IT Alcohols, preparation

RL: CAT (Catalyst use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)

(aliphatic, radicals; energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymerization of acrylic monomers)

IT Pyridinium compounds

STN search for 10765,797

RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(alkoxy; energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

IT Bond cleavage
Bond energy
Cyanine dyes
Dyes
Photoexcitation
Reduction potential
(energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

IT Electron transfer
(photochem.; energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

IT Polymerization catalysts
(radical; energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

IT 65-61-2, Acridine Orange 92-32-0, Pyronine Y 117-92-0 514-73-8
989-38-8, Rhodamine 6G 2390-63-8, Rhodamine 3B 3071-70-3 12243-46-8
14806-50-9 19764-96-6 25470-94-4 36536-22-8 38215-36-0
41044-12-6 47367-75-9, Oxazine 1 53213-82-4 53336-12-2 54290-14-1
60311-02-6 61105-56-4 63123-42-2, N-Methoxy-4-phenylpyridinium
tetrafluoroborate 68842-65-9 72907-71-2 80566-27-4 83846-70-2
98766-45-1 105802-46-8 116450-33-0 116450-35-2 116450-36-3
116450-37-4 116450-42-1 116450-44-3 116450-56-7 121956-74-9
154078-27-0 217963-75-2 389104-49-8 393178-09-1

RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

IT 389104-50-1P
RL: PNU (Preparation, unclassified); PREP (Preparation)
(energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

IT 18525-99-0
RL: CAT (Catalyst use); USES (Uses)
(inhibitor; energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

IT 122644-44-4
RL: NUU (Other use, unclassified); USES (Uses)
(polymerization medium binder; energetics of electron-transfer in dye-sensitized radical formation in N-methoxy-phenylpyridinium fluoroborate initiator system in photopolymn. of acrylic monomers)

RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L11 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:763481 CAPLUS

DN 135:325234

ED Entered STN: 19 Oct 2001

TI Photosensitive body for electrophotography and manufacturing method for the same

IN Sasaki, Teruo; Hara, Kenichi; Suzuki, Shinjiro; Nakamura, Yoichi; Kina, Hideki

PA Japan

SO U.S. Pat. Appl. Publ., 27 pp., U.S., Pat. Appl. Publ., 27 pp.,
Cont.-in-part of U.S. Ser. No. 490,696.

CODEN: USXXCO

DT Patent

LA English

IC ICM G03G005-06

NCL 430056000

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 2001031409	A1	20011018	US 2001-769020	20010125
	US 6569587	B2	20030527		
	JP 2000284513	A2	20001013	JP 2000-18589	20000127

STN search for 10765,797

PRAI JP 1999-22497 A 19990129
US 2000-490696 A2 20000124
JP 2000-18589 A 20000127

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

US 2001031409 ICM G03G005-06
NCL 430056000
US 2001031409 ECLA G03G005/06H6

AB An electrophotog. photosensitive body has a photosensitive layer formed on a conductive substrate. The photosensitive layer contains a phthalocyanine compound and a phthalocyanine dimer as photoconductive materials, wherein the content of the phthalocyanine dimer compound is about 100-300 mmol per mol of the phthalocyanine compound. The resulting electrophotog. photosensitive body has excellent potential retention properties.

ST electrophotog photoreceptor photoconductor metalphthalocyanine dimer phthalocyanine

IT Metallophthalocyanines

RL: TEM (Technical or engineered material use); USES (Uses)
(photoconductive material in electrophotog. photoreceptor containing)

IT Electrophotographic photoconductors (photoreceptors)
(photosensitive body for electrophotog. containing phthalocyanine compound and phthalocyanine dimer compound as photoconductive materials)

IT 91-15-6, 1,2-Benzenedicarbonitrile 7550-45-0, Titanium tetrachloride, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)
(photoconductive material in electrophotog. photoreceptor containing)

IT 132-16-1, Iron phthalocyanine 574-93-6, Phthalocyanine 12581-72-5
14285-65-5, Gallium phthalocyanine 14325-24-7, Manganese phthalocyanine
14376-21-7, Vanadium phthalocyanine 15304-57-1 18756-27-9
23844-93-1 26201-32-1, Titanyl phthalocyanine 34228-03-0,
Germanium phthalocyanine 69402-79-5 74353-48-3 84821-89-6
130531-05-4, Indium phthalocyanine 287383-00-0 367518-22-7

RL: TEM (Technical or engineered material use); USES (Uses)
(photoconductive material in electrophotog. photoreceptor containing)

IT 7664-93-9, Sulfuric acid, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(phthalocyanine compound and phthalocyanine dimer compound in electrophotog. photoreceptor treated by)

L11 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2000:533366 CAPLUS

DN 133:157634

ED Entered STN: 04 Aug 2000

TI Electrophotographic photoconductor with excellent retention and its manufacture

IN Sasaki, Teruo; Hara, Kenichi; Suzuki, Shinjiro; Nakamura, Yoichi; Kina, Hideki

PA Fuji Electric Imaging Device Co. Ltd., Japan

SO Ger. Offen., 32 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM G03G005-06

ICS C07F009-6524

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 2

PATENT NO. KIND DATE APPLICATION NO. DATE

STN search for 10765,797

PI	DE 10002834	A1	20000803	DE 2000-10002834	20000124
	GB 2350690	A1	20001206	GB 2000-1431	20000122
	GB 2350690	B2	20021231		
PRAI	JP 1999-22497	A	19990129		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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DE 10002834	ICM	G03G005-06
	ICS	C07F009-6524
DE 10002834	ECLA	G03G005/06H6
GB 2350690	ECLA	G03G005/06H6

OS MARPAT 133:157634

AB The invention relates to the electrophotog. photoconductor with excellent retention, wherein the electrophotog. photoconductor contains 100 nmol to 300 nmol of phthalocyanine dimer compound per 1 mol of phthalocyanine compound

ST electrophotog photoconductor phthalocyanine dimer

IT Electrophotographic photoconductors (photoreceptors)
(electrophotog. photoconductor containing phthalocyanine dimer compound)

IT 574-93-6, Phthalocyanine

RL: DEV (Device component use); USES (Uses)
(metal free; phthalocyanine and phthalocyanine dimer for electrophotog. photoconductor)

IT 132-16-1, Iron phthalocyanine 12581-72-5 13930-88-6, Vanadium phthalocyanine 14285-65-5, Gallium phthalocyanine 14325-24-7, Manganese phthalocyanine 15304-57-1 18756-27-9 **23844-93-1** 26201-32-1, Titanyl phthalocyanine 34228-03-0, Germanium phthalocyanine 63652-10-8 74353-48-3 84821-89-6 130531-05-4, Indium phthalocyanine 287383-00-0

RL: DEV (Device component use); USES (Uses)
(phthalocyanine and phthalocyanine dimer for electrophotog. photoconductor)

L11 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1998:119257 CAPLUS

DN 128:223829

ED Entered STN: 27 Feb 1998

TI Electrophotographic photoreceptor using iron phthalocyanine compound

IN Taho, Fumiaki; Iijima, Masakazu; Yamazaki, Kazuo

PA Fuji Xerox Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03G005-06

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

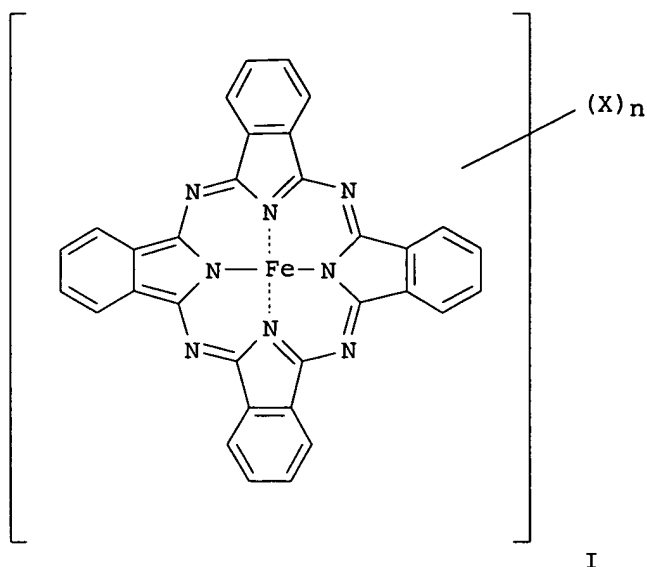
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10048862	A2	19980220	JP 1996-204358	19960802
PRAI JP 1996-204358		19960802		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 10048862	ICM	G03G005-06
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GI



AB The title photoreceptor comprises a photosensitive layer containing an electron-attracting group-containing Fe phthalocyanine compound I (X = electron-attracting group; n = 1-16). The neg. charging photoreceptor shows high photosensitivity, improved charging properties, and low residual potential. Thus, an Al substrate with an undercoat layer was coated with a charge-generating layer containing 2,3,6,7,10,11,14,15-octafluoroiron phthalocyanine and with a charge-transporting layer containing (m-MeC₆H₄NPhC₆H₄-p)₂ to give a photoreceptor.

ST electrophotog photoreceptor charge generating agent; iron phthalocyanine charge generating agent electrophotog

IT Electrophotographic photoconductors (photoreceptors)
(electrophotog. photoreceptor containing iron phthalocyanine compound)

IT **23844-93-1P** 125825-46-9P
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(electrophotog. photoreceptor containing iron phthalocyanine compound)
IT 1835-65-0, Tetrafluorophthalonitrile 7758-94-3, Ferrous chloride
134450-56-9, 4,5-Difluorophthalonitrile
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of fluoroiron phthalocyanine compound)

L11 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1998:62642 CAPLUS

DN 128:96041

ED Entered STN: 02 Feb 1998

TI New air-stable n-channel organic thin film transistors

AU Bao, Zhenan; Lovinger, Andrew J.; Brown, Janelle

CS Bell Laboratories, Lucent Technologies, Murray Hill, NJ, 07974, USA

SO Journal of the American Chemical Society (1998), 120(1), 207-208

CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

CC 76-3 (Electric Phenomena)

Section cross-reference(s): 78

AB Air-stable n-channel semiconducting materials are important components of

STN search for 10765,797

p-n junction diodes, bipolar transistors, and complementary circuits. The authors synthesized metallophthalocyanines with strong electron-withdrawing groups. Among them, hexadecahalogenated metallophthalocyanines function as air-stable n-channel semiconductors with a maximum electron field-effect mobility of 0.03 cm²/V-s. This is by far the highest electron mobility reported for air-stable n-channel organic semiconductors.

ST halogenated metallophthalocyanine sublimation TFT electron mobility

IT Air

Semiconductor device fabrication

Sublimation

Thin film transistors

Vapor deposition process

(fabrication of air-stable multi channel organic TFTs from metallophthalocyanines with high electron mobilities)

IT Electron mobility

(field-effect; fabrication of air-stable multi channel organic TFTs from metallophthalocyanines with high electron mobilities)

IT Transition metal complexes

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)

(phthalocyanines; fabrication of air-stable multi channel organic TFTs from metallophthalocyanines with high electron mobilities)

IT 14916-87-1 23844-93-1 31396-84-6 50662-67-4 52629-20-6

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)

(fabrication of air-stable multi channel organic TFTs from metallophthalocyanines with high electron mobilities)

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD

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- (2) Bao, Z; Adv Mater 1997, V9, P42 CAPLUS
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L11 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1995:777018 CAPLUS

DN 123:216885

ED Entered STN: 06 Sep 1995

STN search for 10765,797

TI Structure of the blue forms of rare earth bisphthalocyanines
AU Tomilova, L. G.; Dyumaev, K. M.; Tkachenko, O. P.
CS Organic Intermediates and Dyes Institute, Moscow, 103787, Russia
SO Izvestiya Akademii Nauk, Seriya Khimicheskaya (1995), (3), 425-30
CODEN: IASKEA
PB Nauka
DT Journal
LA Russian
CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 72
AB Proofs of the structure of blue forms of the rare earth elements
bisphthalocyanines obtained from spectral data are summarized. These
compds. are represented as the sandwich-type complexes with isoelectronic
phthalocyanine ligands connecting with tetravalent metal ion,
[Pc2-Ln4+Pc2-]0. The lutetium octa(perfluoro-tert-butyl)- and
perchlorobisphthalocyanines were prepared. The redox potentials and
electronic spectra were determined for bis(octa-tert-butylphthalocyaninato) rare
earth.
ST electron configuration rare earth phthalocyaninato sandwich
IT Electric potential
(oxidation, of rare earth phthalocyaninato complexes)
IT Rare earth compounds
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(phthalocyanine complexes, preparation and redox potentials and electronic
spectra and electron configuration of blue)
IT Electric potential
(reduction, of rare earth phthalocyaninato complexes)
IT Electric potential
(redox, of rare earth phthalocyaninato complexes)
IT 84419-18-1 84419-23-8 92482-05-8 137597-36-5 137597-39-8
137597-40-1 137597-41-2 137597-42-3 137597-45-6 137597-48-9
167899-73-2
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation,
nonpreparative)
(electrochem. formation and electronic spectra and oxidation potential of)
IT 84419-19-2 84419-21-6 84419-24-9 92482-04-7 100842-58-8
100842-63-5 100842-64-6 137597-43-4 167899-74-3 167899-75-4
167899-76-5 167899-77-6 167899-78-7 167899-79-8 167899-80-1
167899-81-2 167899-82-3 167899-83-4 167899-84-5 167899-85-6
167899-86-7 167899-87-8
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation,
nonpreparative)
(electrochem. formation and electronic spectra of)
IT 1953-99-7, Tetrachlorophthalonitrile 65653-86-3, 4-Perfluoro-tert-
butylphthalodinitrile 167899-90-3, (Acetato)(Hexadexachlorophthalocyanin
ato)lutetium
RL: RCT (Reactant); RACT (Reactant or reagent)
(for preparation of lutetium phthalocyaninato complex)
IT 84419-20-5 137597-43-4
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation,
nonpreparative)
(oxidation potential of)
IT 92482-07-0P 100842-62-4P 106856-34-2P 106955-80-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and electronic spectra and oxidation potential of blue)
IT 84419-17-0P 84419-25-0P 100842-59-9P 100842-65-7P 106856-35-3P
106856-36-4P 112509-61-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and electronic spectra and redox potential of blue)
IT 84419-22-7P 137597-44-5P

STN search for 10765,797

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and electronic spectra and redox potential of green)
IT 154035-61-7P, Bis(Perchlorophthalocyaninato)lutetium 167899-91-4P
, Bis(tetra-perfluoro-tert-butylphthalocyaninato)lutetium
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L11 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:695991 CAPLUS
DN 123:82824
ED Entered STN: 25 Jul 1995
TI Metal-ligand catalyzed decomposition of organic hydroperoxides
IN Bhinde, Manoj V.; Lyons, James E.; Ellis, Jr Paul E.
PA Sun Company, Inc. (RandM), USA
SO U.S., 7 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM C07C029-00
ICS C07C031-12; C07C035-14; C07C033-22
NCL 568835000
CC 23-10 (Aliphatic Compounds)
Section cross-reference(s): 78
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5395988	A	19950307	US 1994-223090	19940404
	US 5550301	A	19960827	US 1995-398024	19950303
	CA 2146316	AA	19951005	CA 1995-2146316	19950404
	EP 676221	A1	19951011	EP 1995-302245	19950404
	EP 676221	B1	19981223		
	R: BE, DE, FR, GB, IT, NL				
	JP 08048641	A2	19960220	JP 1995-101582	19950404
	US 5672778	A	19970930	US 1996-703423	19960826
PRAI	US 1994-223090	A2	19940404		
	US 1995-398024	A	19950303		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 5395988	ICM	C07C029-00
	ICS	C07C031-12; C07C035-14; C07C033-22
	NCL	568835000
US 5395988	ECLA	A62D003/00E; A62D003/00E5; C07C029/132; C07C031/12; C07C035/08; C07C407/00P
US 5550301	ECLA	C07C029/132; C07C045/53; C07C407/00P; C07C031/12; C07C035/08
EP 676221	ECLA	C07C029/132; C07C045/53

AB Organic hydroperoxides are decomposed by drying a reaction mixture containing
the organic hydroperoxide and an organic solvent and contacting the dried reaction
mixture with a metal organic ligand catalyst, such as Fe phthalocyaninato
complexes, under hydroperoxide decomposition conditions. An organic co-solvent
for the hydroperoxide may also be used.
ST hydroperoxide decompn iron phthalocyaninato catalyst
IT Drying
(in decomposition of organic hydroperoxides using iron phthalocyaninato
complex catalysts)
IT Decomposition catalysts
(iron phthalocyaninato complexes from organic hydroperoxides involving

STN search for 10765,797

drying method)
IT Ketones, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solvents; for decomposition of organic hydroperoxides involving drying
method
in presence of iron phthalocyaninato catalyst)
IT 31213-66-8 142711-86-2
RL: CAT (Catalyst use); USES (Uses)
(decomposition catalyst for organic hydroperoxides involving drying method)
IT 130977-61-6P 165250-96-4P 165407-52-3P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
USES (Uses)
(decomposition catalyst for organic hydroperoxides involving drying method)
IT 75-91-2, tert-Butyl hydroperoxide 766-07-4, Cyclohexyl hydroperoxide
RL: RCT (Reactant); RACT (Reactant or reagent)
(decomposition involving drying method in presence of iron phthalocyaninato
catalyst)
IT 23844-93-1, (Perfluorophthalocyaninato)iron
RL: RCT (Reactant); RACT (Reactant or reagent)
(for preparation of iron perfluorophthalocyaninato oxo dimer)
IT 78325-66-3, tert-Butylphthalic anhydride
RL: RCT (Reactant); RACT (Reactant or reagent)
(for preparation of iron phthalocyaninato complex)
IT 67-64-1, 2-Propanone, uses 75-65-0, tert-Butanol, uses 108-10-1,
Isobutyl methyl ketone 108-93-0, Cyclohexanol, uses 108-94-1,
Cyclohexanone, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; for decomposition of organic hydroperoxides involving drying
method
in presence of iron phthalocyaninato catalyst)
L11 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1994:643996 CAPLUS
DN 121:243996
ED Entered STN: 12 Nov 1994
TI Faujasite-type zeolites modified with iron perfluorophthalocyanines:
Synthesis and characterization
AU Gabrielov, A. G.; Balkus, K. J. Jr.; Bell, S. L.; Bedioui, F.; Devynck, J.
CS Dep. Chem., Univ. Tex. Dallas, Richardson, TX, 75083-0688, USA
SO Microporous Materials (1994), 2(2), 119-26
CODEN: MCMTEV; ISSN: 0927-6513
DT Journal
LA English
CC 78-4 (Inorganic Chemicals and Reactions)
AB The synthesis and characterization of hexadeca- or perfluorophthalocyanine
complexes of Fe(II) (FeF16Pc) in synthetic faujasite-type zeolites is
reported. The encapsulation of FeF16Pc in NaY zeolite by the template
synthesis method as well as the synthesis of NaX around FeF16Pc are
discussed. A spectroscopic (UV-visible, IR) and electrochem. anal. of the
modified zeolites, providing evidence for encapsulation, is presented and
compared with the unsubstituted FePc complex.
ST zeolite faujasitic iron phthalocyanine encapsulated
IT Reduction, electrochemical
(of iron perfluorophthalocyanine complex encapsulated in zeolite NaY)
IT Zeolites, uses
RL: NUU (Other use, unclassified); USES (Uses)
(NaY, preparation of faujasite-type zeolites modified with iron
perfluorophthalocyanines)
IT 555-31-7 1835-65-0 7631-86-9, Silica, reactions 13463-40-6
RL: RCT (Reactant); RACT (Reactant or reagent)

STN search for 10765,797

(preparation of faujasite-type zeolites modified with iron
perfluorophthalocyanines)

IT 23844-93-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation of faujasite-type zeolites modified with iron
perfluorophthalocyanines)

L11 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1994:565824 CAPLUS
DN 121:165824
ED Entered STN: 01 Oct 1994
TI Electrochemistry of chemically modified zeolites: discussion and new
trends
AU Bedioui, Fethi; Roue, Lionel; Briot, Emmanuel; Devynck, Jacques; Bell,
Stephen L.; Balkus, Kenneth J., Jr.
CS Laboratoire d'Electrochimie Analytique et Appliquee (URA no. 216 du CNRS)
Ecole Nationale Supérieure de Chimie de Paris, 11 rue Pierre et Marie
Curie, Paris, 75231/05, Fr.
SO Journal of Electroanalytical Chemistry (1994), 373(1-2), 19-29
CODEN: JECHES; ISSN: 0368-1874
DT Journal
LA English
CC 72-2 (Electrochemistry)
Section cross-reference(s): 68
AB Synthetic faujasite Y zeolite has been modified chemical by fixing metal
complexes within the pore system. The electrochem. behavior of
ferricenium, fixed by ion exchange, and Fe(III)Salen+, Mn(III)Salen+,
Co(II) and Fe(II) + hexadecafluorophthalocyanines phys. encapsulated into
the zeolite supercages has been investigated by cyclic voltammetry. The
results show a clear difference between the electrochem. of the
zeolite-exchanged cationic complexes (i.e. ferricenium) and the
zeolite-encapsulated complexes (i.e. Fe(III)Salen+) resulting from their
method of fixation. Thus the use of graphite pressed powder composite
electrodes allows electrochem. anal. of the intrazeolite complexes. The
electron transfer and charge compensation processes are discussed.
ST zeolite chem modified transition metal complex; redox reaction electrochem
modified zeolite; electro transfer modified zeolite; adsorbed substance
zeolite redox
IT Electron exchange and Charge transfer
(for transition metal complexes encapsulated in zeolites)
IT Ion exchange
(in preparation of zeolites modified with transition metal complexes)
IT Adsorbed substances
(transition metal complexes, on zeolite with encapsulated transition
metal complexes)
IT Zeolites, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(Y, electrochem. redox reactions of transition metal complexes
encapsulated in)
IT Redox reaction
(electrochem., of transition metal complexes encapsulated in zeolites)
IT 47837-98-9
RL: PRP (Properties)
(electrochem. redox reactions of adsorbed, on zeolite modified with
transition metal complex)
IT 23844-93-1 52629-20-6
RL: PRP (Properties)
(electrochem. redox reactions of encapsulated, in zeolite)
IT 12125-80-3, Ferricenium 14186-74-4 47111-14-8

STN search for 10765,797

RL: PRP (Properties)
(electrochem. redox reactions of zeolite modified with)
IT 7439-89-6, Iron, reactions 7440-48-4, Cobalt, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(electrochem. redox reactions of zeolite modified with divalent and
hexadecafluorophthalocyanine)
IT 117446-19-2
RL: PRP (Properties)
(electrochem. redox reactions of zeolite modified with divalent cobalt
or iron and)
IT 429-42-5, Tetrabutylammonium tetrafluoroborate 7791-03-9, Lithium
perchlorate 14283-07-9, Lithium tetrafluoroborate
RL: PRP (Properties)
(electrochem. redox reactions of zeolites modified with transition
metal complexes in organic solvent containing)
IT 67-68-5, DMSO, uses 75-05-8, Acetonitrile, uses
RL: USES (Uses)
(electrochem. redox reactions of zeolites modified with transition
metal complexes in solution of)
IT 7782-42-5, Graphite, uses
RL: USES (Uses)
(electrode, mixed with zeolite modified with transition metal
complexes, electrochem. redox reactions of)

L11 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1994:17542 CAPLUS
DN 120:17542
ED Entered STN: 08 Jan 1994
TI Electrochemistry of zeolite-encapsulated metal complexes
AU Bedioui, F.; Roue, L.; Gaillon, L.; Devynck, J.; Bell, S. L.; Balkus, K.
J., Jr.
CS Lab. Electrochim., Ec. Natl. Super. Chim. Paris, Paris, 75231, Fr.
SO Preprints - American Chemical Society, Division of Petroleum Chemistry
(1993), 38(3), 529-35
CODEN: ACPCAT; ISSN: 0569-3799
DT Journal
LA English
CC 72-2 (Electrochemistry)
Section cross-reference(s): 78
AB The authors continue their exploration of the electrochem. behavior in
non-aqueous solution of entrapped metal-Schiff bases and perfluorinated
metallophthalocyanines inside zeolite Y. Specifically the authors report
the results of their cyclic voltammetry anal. on Ru(III)(salen) and
Mn(III)(salen). (H₂salen = N,N'-bis(salicylaldehyde)ethylenediamine)
entrapped complexes and Co(II)PcF₁₆, Cu(II)PcF₁₆, Fe(II)PcF₁₆ (H₂PcF₁₆ =
perfluorinated phthalocyanine) encapsulated complexes. This study is
aimed at promoting supported phthalocyanine and salen type catalysts and
may constitute a new contribution to the recently reported reviews about
zeolite-modified electrodes.
ST redn electrochem zeolite encapsulated metal complex;
perfluorophthalocyanine transition metal encapsulated complex
electroredox; ruthenium ethylenebissalicylidinine zeolite encapsulated
electroredox complex; manganese ethylenebissalicylidinine zeolite
encapsulated electroredox complex; cobalt perfluorophthalocyanine zeolite
encapsulated complex electroredox; copper perfluorophthalocyanine zeolite
encapsulated complex electroredox; iron perfluorophthalocyanine zeolite
encapsulated complex electroredox
IT Reduction, electrochemical
(of transition metal perfluorinated phthalocyanines and manganese and
ruthenium ethylenebis(salicylaldehyde) complexes encapsulated in

STN search for 10765,797

- zeolite and in free form in acetonitrile or DMSO)
- IT Solvent effect
(on electrochem. redox reaction of transition metal complexes
encapsulated in zeolite and in free form)
- IT Transition metals, compounds
RL: PRP (Properties)
(perfluorophthalocyanine complexes, electrochem. redox reactions of,
encapsulated in zeolite and in free form)
- IT Zeolites, uses
RL: USES (Uses)
(Y, electrochem. redox reaction of transition metal-perfluorinated
phthalocyanine complexes and iron or ruthenium
ethylenebis(salicylaldehyde) complexes encapsulated in, in acetonitrile
or DMSO)
- IT Redox reaction
(electrochem., of transition metal perfluorinated phthalocyanines and
manganese and ruthenium ethylenebis(salicylaldehyde) complexes
encapsulated in zeolite and in free form in acetonitrile or DMSO)
- IT Electric potential
(redox, of transition metal perfluorinated phthalocyanines and
manganese and ruthenium ethylenebis(salicylaldehyde) complexes
encapsulated in zeolite and in free form in acetonitrile or DMSO)
- IT 90-13-1
RL: PRP (Properties)
(condensation of tetrafluorophthalonitrile in metalacetate-containing,
complex formation in)
- IT 1835-65-0
RL: PRP (Properties)
(condensation of, with chloronaphthalene containing metal acetate, complex
formation in)
- IT 152635-83-1
RL: PRP (Properties)
(elec. potential of couple containing, encapsulated in zeolite and in free
form in acetonitrile and DMSO)
- IT 36026-26-3
RL: PRP (Properties)
(elec. potential of couple containing, encapsulated in zeolite and in free
form in acetonitrile or DMSO)
- IT 151653-10-0
RL: PRP (Properties)
(elec. potential of couple containing, encapsulated in zeolite in DMSO)
- IT 151653-13-3
RL: PRP (Properties)
(elec. potential of redox couple containing, encapsulated in zeolite in
DMSO)
- IT 151653-12-2
RL: PRP (Properties)
(elec. potential of redox couple containing, encapsulated in zeolite or in
free form DMSO)
- IT 151653-11-1
RL: PRP (Properties)
(elec. potential of redox couple containing, encapsulated in zeolite or in
free form in acetonitrile or DMSO)
- IT 151705-27-0
RL: PRP (Properties)
(elec. potential of redox couple containing, encapsulated in zeolite, in
DMSO)
- IT 151705-28-1
RL: PRP (Properties)
(elec. potential of redox couple containing, encapsulated in zeolite, in

STN search for 10765,797

acetonitrile)
IT 151705-29-2 152635-84-2
RL: PRP (Properties)
(elec. potential of redox couple containing, in DMSO)
IT 67-68-5, DMSO, properties 75-05-8, Acetonitrile, properties
RL: PRP (Properties)
(elec. potential of zeolite-encapsulated and of free complexes in)
IT 429-42-5, Tetrabutylammoniumtetrafluoroborate
RL: PRP (Properties)
(electrochem. redox reaction of zeolite-encapsulated and free complexes
in acetonitrile or DMSO containing)
IT 14916-87-1 ~~23844-93-1~~
RL: PRP (Properties)
(electrochem. redox reaction of zeolite-encapsulated and free, in DMSO)
IT 106639-39-8
RL: PRP (Properties)
(electrochem. redox reaction of zeolite-encapsulated and free, in
acetonitrile)
IT 47111-14-8
RL: PRP (Properties)
(electrochem. redox reaction of zeolite-encapsulated and free, in
acetonitrile and in DMSO)
IT 151705-26-9
RL: PRP (Properties)
(electrochem. redox reaction of zeolite-encapsulated, in DMSO)
IT 118151-26-1
RL: PRP (Properties)
(electrochem. redox reactions of zeolite-incapsulated and free, in
acetonitrile and in DMFO)
IT 7440-44-0, Carbon, uses
RL: USES (Uses)
(electrode, cyclic voltammetry of transition metal complexes on,
comparison with zeolite-encapsulated complexes)
IT 7782-42-5, Graphite, uses
RL: USES (Uses)
(electrode, with zeolite-encapsulated metal complexes)

L11 ANSWER 14 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1990:508094 CAPLUS

DN 113:108094

ED Entered STN: 16 Sep 1990

TI Conductive charge-transport complex

IN Yamada, Akira; Shigehara, Junko; Suda, Yasumasa

PA Institute of Physical and Chemical Research, Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C07D487-22

ICS C07D339-06; C07D345-00; C07D519-00; H01B001-12

CC 78-7 (Inorganic Chemicals and Reactions)

Section cross-reference(s): 76

FAN.CNT 1

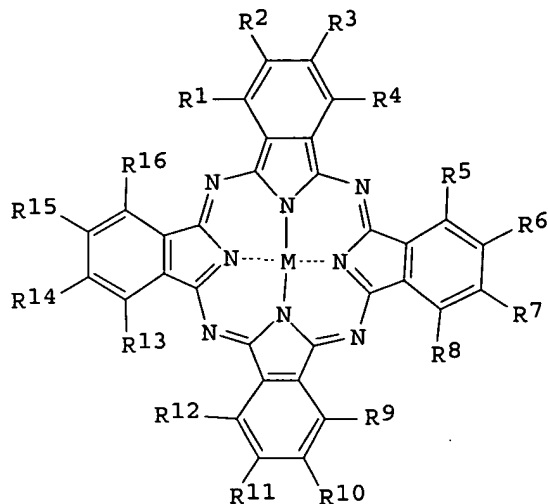
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02049785	A2	19900220	JP 1988-201141	19880812
PRAI	JP 1988-201141		19880812		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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STN search for 10765,797

JP 02049785 ICM C07D487-22
ICS C07D339-06; C07D345-00; C07D519-00; H01B001-12
OS MARPAT 113:108094
GI



AB A highly conductive charge-transport complex is described, which has been prepared using I (R1-16 = H, F, CN, ≥ 2 Rs being F or CN to give a sym. structure; and M = H, metal, metal oxide as an electron acceptor.
ST phthalocyanine charge transfer complex; electron acceptor phthalocyanine complex; phthalocyanine complex conductor
IT Electric conductors

(charge-transfer complex single crystals)

IT Charge-transfer complexes

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of conductive single crystals of)

IT 14916-87-1P 23844-93-1P 31243-92-2P 31366-25-3P
31396-84-6P 50708-37-7P 52629-20-6P 54489-01-9P 55259-49-9P
70728-86-8P 75810-80-9P 76221-26-6P 76228-26-7P 76228-27-8P
76228-28-9P 78763-81-2P 88946-68-3P 88946-69-4P 106157-28-2P
106639-39-8P 117446-19-2P 121258-16-0P 123516-57-4P 128653-34-9P
128653-36-1P 128653-37-2P 128653-38-3P 128653-39-4P 128653-40-7P
128653-41-8P 128653-42-9P 128653-43-0P 128653-44-1P 128653-45-2P
128653-46-3P 128653-97-4P 128653-98-5P 128675-60-5P 128976-35-2P
128976-44-3P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of conductive single crystals of)

L11 ANSWER 15 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1988:580445 CAPLUS

DN 109:180445

ED Entered STN: 12 Nov 1988

TI Negative working photoresists responsive to longer wavelengths and novel coated articles

IN Farid, Samir Y.; Haley, Neil F.; Moody, Roger E.; Specht, Donald P.

PA Eastman Kodak Co., USA

SO U.S., 18 pp.

CODEN: USXXAM

DT Patent

STN search for 10765,797

LA English
IC ICM G03C001-76
NCL 430281000
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

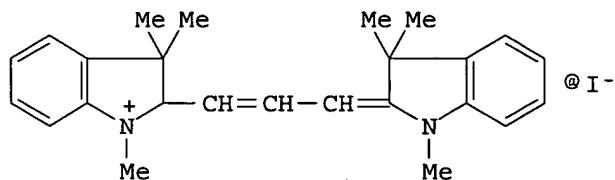
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4743530	A	19880510	US 1986-933660	19861121
	CA 1329041	A1	19940503	CA 1987-547869	19870925
	JP 63142346	A2	19880614	JP 1987-292193	19871120
	EP 269397	A2	19880601	EP 1987-310306	19871123
	EP 269397	A3	19881207		
	R: DE, FR, GB				
PRAI	US 1986-933658	A	19861121		
	US 1986-933660	A	19861121		
	US 1986-933712	A	19861121		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4743530	ICM	G03C001-76
	NCL	430281000

GI



AB A neg. working photoresist, sensitive to wavelengths ≥ 550 nm comprises: an organic film-forming component containing ethylenic unsatn. and capable of selective immobilization by addition at the site of unsatn.; and a quaternized azinium salt activator in a concentration sufficient to increase response of the photoresist to the light of a photosensitizer dye having absorption peak at ≥ 550 nm and reduction potential (E_{red}) ≤ 0.1 V more than that of the azinium salt. An article coated with the above photoresist is also claimed. The photoresists form color images efficiently with any class of photosensitizer dye. Thus, a photoresist composition containing tris(2-acryloyloxyethyl) 1,2,4-benzenetricarboxylate and 2-acryloyloxyethyl benzoate as monomers, 1-methoxy-4-phenylpyridinium tetrafluoroborate as activator and I as the dye, had λ_{max} at 555 nm and E_{red} -1.0 V compared to -0.75 V for the activator.

ST neg photoresist dye activator; color photoresist image

IT Polymerization catalysts

(photoresist composition containing, reduction potential in relation to)

IT Resists

(photo-, neg.-working, composition containing dye and activator and monomer for, reduction potential in relation to)

IT Electric potential

(reduction, of photosensitizer and activator, in photoresist composition)

IT 15622-80-7 39144-57-5

RL: TEM (Technical or engineered material use); USES (Uses)

(photoresist composition containing, activator and photosensitizer for, reduction

STN search for 10765,797

potential in relation to)

IT 92-32-0 514-73-8 634-21-9 2768-90-3 3065-70-1 3071-70-3
4727-50-8 14238-53-0 14806-50-9 15185-43-0 17636-07-6 19764-96-6
23178-67-8 23857-69-4 24796-94-9 25470-94-4 36437-64-6
36536-22-8 41830-81-3 53213-85-7 54290-14-1 60311-02-6
61105-56-4 61526-53-2 62669-60-7 80566-27-4 94564-82-6
94564-93-9 100834-48-8 114720-33-1 116450-38-5 116450-39-6
116450-40-9 116450-41-0 116450-42-1 116450-44-3 116450-45-4
116450-47-6 116450-48-7 116450-49-8 116450-50-1 116450-51-2
116450-52-3 116450-53-4 116450-56-7 116450-60-3 116477-16-8
116777-16-3 116777-17-4 116777-20-9 116777-22-1 116777-27-6
116777-34-5 116805-57-3 117060-44-3 117088-88-7
RL: USES (Uses)
(photosensitizer, photoresist composition containing, reduction potential in
relation to)

IT 63123-42-2 116450-62-5 116450-64-7 116450-65-8 116450-67-0
116450-68-1 116450-70-5 116477-18-0
RL: CAT (Catalyst use); USES (Uses)
(polymerization catalyst, photoresist composition containing reduction
potential in
relation to)

IT 96-66-2 116450-72-7 116450-74-9
RL: CAT (Catalyst use); USES (Uses)
(polymerization catalyst, photoresist composition containing, reduction
potential in
relation to)

L11 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1988:539163 CAPLUS
DN 109:139163
ED Entered STN: 14 Oct 1988
TI Dye-sensitized photographic imaging system
IN Farid, Samir Y.; Haley, Neil F.; Moody, Roger E.; Specht, Donald P.
PA Eastman Kodak Co., USA
SO U.S., 25 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM G03C001-72
NCL 430281000
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 41

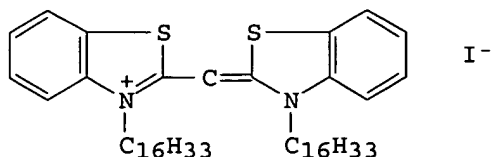
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4743531	A	19880510	US 1986-933712	19861121
	CA 1329042	A1	19940503	CA 1987-547870	19870925
	JP 63138345	A2	19880610	JP 1987-292194	19871120
	EP 269397	A2	19880601	EP 1987-310306	19871123
	EP 269397	A3	19881207		
	R: DE, FR, GB				
PRAI	US 1986-933658	A	19861121		
	US 1986-933660	A	19861121		
	US 1986-933712	A	19861121		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4743531	ICM	G03C001-72
	NCL	430281000

GI



AB A photog. imaging system is disclosed comprising an imaging dye or a precursor thereof, a hardenable organic component containing ethylenic unsatn. sites and capable of imagewise modulating mobility of the dye or dye precursor as a function of addition at the sites of ethylenic unsatn., and cointiators for ethylenic addition. The cointiators include an azinium salt activator and a photosensitizer which is a dye exhibiting a reduction potential which in relation to that of the ionized azinium salt activator is ≤ 0.1 V more pos., and when the photosensitizer is a keto dye having its principal absorption peak at a wavelength < 550 nm, it exhibits when excited by imaging radiation and intersystem crossing efficiency to a triplet state of $< 10\%$. The system produces primary dye images efficiently with radiation of any desired wavelength in the visible spectrum and can exhibit sensitivity extending into near IR region. Thus, a composition

containing

Ph 1,2,4-tri(2-acryloyloxy Et carboxylate), 2-acryloyloxy Et benzoate, 1-methoxy-4-Ph pyridinium tetrafluoroborate (reduction potential-0.75 V), and I (λ_{\max} 430 nm, reduction potential -1.45 V) was highly effective in forming images.

ST photoimaging compn dye sensitized; redn potential dye image

IT Photoimaging compositions and processes

(color, dye-sensitized, reduction potential in relation to)

IT Polymerization catalysts

(photoimaging composition containing, reduction potential in relation to)

IT Dyes

(photosensitizer, for imaging composition, reduction potential in relation

to)

IT Electric potential

(reduction, of dyes and activators, for photoimaging composition)

IT 15622-80-7 39144-57-5

RL: USES (Uses)

(photoimaging composition containing, dye-sensitized)

IT 65-61-2 92-32-0 117-92-0 514-73-8 550-15-2 634-21-9 977-96-8
 989-38-8 2156-29-8 2768-90-3 3065-70-1 3065-71-2 3071-70-3
 4727-50-8 14238-43-8 14238-53-0 14806-50-9 15185-43-0 17636-07-6
 19764-96-6 23178-67-8 23857-69-4 24796-94-9 25470-94-4
 27425-55-4 36437-64-6 36536-22-8 38215-36-0 41044-12-6
 41387-42-2 41830-81-3 53213-82-4 53213-85-7 53332-41-5
 54290-14-1 54797-03-4 54854-14-7 60311-02-6 61105-56-4
 61526-53-2 62669-60-7 62669-62-9 68818-86-0 80566-27-4
 94564-82-6 94564-93-9 98766-45-1 100301-28-8 100834-48-8
 100834-63-7 105802-46-8 114720-33-1 116450-20-5 116450-21-6
 116450-22-7 116450-23-8 116450-24-9 116450-26-1 116450-28-3
 116450-29-4 116450-30-7 116450-31-8 116450-33-0 116450-36-3
 116450-37-4 116450-38-5 116450-39-6 116450-40-9 116450-41-0
 116450-42-1 116450-44-3 116450-45-4 116450-46-5 116450-47-6
 116450-48-7 116450-49-8 116450-50-1 116450-51-2 116450-52-3
 116450-53-4 116450-54-5 116450-56-7 116450-58-9 116450-60-3
 116477-15-7 116477-16-8 116477-17-9

STN search for 10765,797

RL: USES (Uses)
(photosensitizer, in photoimaging composition reduction potential in relation to)

IT 96-66-2 63123-42-2 116450-61-4 116450-62-5 116450-64-7
116450-65-8 116450-67-0 116450-68-1 116450-70-5 116450-72-7
116450-74-9 116477-18-0
RL: CAT (Catalyst use); USES (Uses)
(polymerization catalyst, photoimaging composition containing, reduction potential in relation to)

IT 116450-32-9P 116450-34-1P 116450-35-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and use of, as photosensitizer in photoimaging composition, reduction potential in relation to)

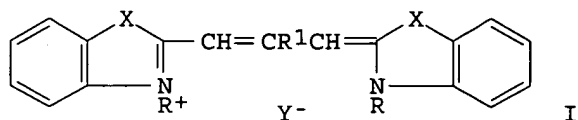
IT 10258-72-7 16002-30-5 17754-90-4, 4-Diethylaminosalicylaldehyde
116450-75-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, coumarin dye from)

L11 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1986:11084 CAPLUS
DN 104:11084
ED Entered STN: 11 Jan 1986
TI Steric and electronic control of iron porphyrin catalyzed hydrocarbon oxidations
AU Nappa, Mario J.; Tolman, Chadwick A.
CS Cent. Res. Dev. Dep., E. I. du Pont de Nemours and Co., Inc., Wilmington, DE, 19898, USA
SO Inorganic Chemistry (1985), 24(26), 4711-19
CODEN: INOCAJ; ISSN: 0020-1669
DT Journal
LA English
CC 67-2 (Catalysis, Reaction Kinetics, and Inorganic Reaction Mechanisms)
Section cross-reference(s): 22
AB The yields and product distributions in the oxidation of hydrocarbons (cyclohexane, pentane, octane, methylcyclohexane, tert-butylcyclohexane, and ethylbenzene), with substituted Fe tetraphenylporphyrins and iodosobenzene, are affected by the nature and location of Ph ring substituents. These substrates were used to measure the activity, regioselectivity, substrate selectivity, and stereoselectivity of these substituted Fe porphyrin catalysts. Higher yields are observed with Fe porphyrins having bulky substituents near the Fe center. Kinetics measurements and concentration studies show that these substituents improve lifetimes by hindering catalyst bimol. self-destruction. Higher yields are also observed with electron-withdrawing substituents. A new Fe fluoro-pocket porphyrin shows high activity due to this electronic effect. Substrate and regioselectivity are also influenced by steric and electronic effects of the Fe porphyrin Ph ring substituents. Bulky porphyrins also affect the stereoselectivity at the 2-, 3- and 4-positions in tert-butylcyclohexane oxidation. A mechanism supported by kinetic modeling studies is proposed for the oxidation reactions.
ST oxidn catalyst hydrocarbon iron porphyrin; strereoselectivity iron porphyrin catalyst; regioselectivity iron porphyrin catalyst; substituent effect iron porphyrin catalyst
IT Stereochemistry
(in oxidation of hydrocarbons on iron porphyrin catalysts)
IT Oxidation catalysts
(iron porphyrins, for hydrocarbons)

STN search for 10765,797

IT Porphyrins
RL: USES (Uses)
(iron, catalysts, for oxidation of hydrocarbons)
IT Kinetics of oxidation
(of hydrocarbons, on iron porphyrin catalysts)
IT Substituent effect
(on oxidation, of hydrocarbons on iron porphyrin catalysts)
IT Hydrocarbons, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of, on iron porphyrin catalysts)
IT Phenyl group
(substituent effect of, in iron porphyrin oxidation catalysts for hydrocarbons)
IT 132-16-1 16456-81-8 19496-18-5 23844-93-1 36965-71-6
52155-49-4 52155-50-7 53470-05-6 81245-21-8 98858-68-5
98858-69-6 98858-70-9 98858-71-0 98858-72-1
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for oxidation of hydrocarbons)
IT 100-41-4, reactions 108-87-2 109-66-0, reactions 110-82-7, reactions
111-65-9, reactions 3178-22-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of, on iron porphyrin catalysts)

L11 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1976:594075 CAPLUS
DN 85:194075
ED Entered STN: 12 May 1984
TI Conformational analysis of carbocyanine dyes with variable-temperature
proton Fourier transform nuclear magnetic resonance spectroscopy
AU Henrichs, P. M.; Gross, S.
CS Res. Lab., Eastman Kodak Co., Rochester, NY, USA
SO Journal of the American Chemical Society (1976), 98(23), 7169-75
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English
CC 40-12 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
Section cross-reference(s): 22
GI



AB Conformational properties were determined for meso-substituted carbocyanine dyes I (X = S, Se, O; R = Et, Me; R1 = Et, Me, Ph, Me3C, H; Y = C3F7CO2, ClO4). At equilibrium, the dyes in acetone-d6 exist in varying proportions of two conformations differing in geometry about one of the 8-9 bonds in the connecting chain. The cis conformation is favored by meso substitution. For the sulfur- and selenium-containing dyes, exchange of the nonequivalent protons on the connecting chain occurs rapidly by means of a path not involving the trans conformation as an intermediate. The free-energy barriers for conversion of the cis into the di-cis conformation are lower for the sulfur- and selenium-containing dyes than for the oxygen-containing

The free-energy barrier for the cis to di-cis process is much greater when R1 = Ph and is apparently larger even than the barrier for the cis to trans

STN search for 10765,797

exchange. Correspondingly, very bulky meso substituents lower the barrier for conversion of the cis into the di-cis form through an increase of the energy of the ground-state conformations.

ST carbocyanine dye conformation isomerization; NMR carbocyanine dye conformation; selenacarbocyanine dye conformation; substituent effect carbocyanine conformation

IT Dyes, cyanine
(carbocyanines, conformational isomerization of, heteroatom and meso-substituent effect on)

IT Kinetics of isomerization
(cis-trans conformational, of carbocyanine dyes)

IT Isomerization
(cis-trans conformational, of carbocyanine dyes, heteroatom and meso-substituent effect on)

IT Conformation and Conformers
(of carbocyanine dyes, heteroatom and meso-substituent effect on)

IT Free energy of activation
(of conformational isomerization of carbocyanine dyes)

IT Substituent effect
(on conformational isomerization of carbocyanine dyes)

IT 42165-74-2
RL: PRP (Properties)
(NMR spectra of)

IT 61105-56-4 61105-58-6 61105-60-0
61105-61-1 61105-63-3 61105-64-4 61105-66-6
RL: PRP (Properties)
(NMR spectra of, conformation in relation to)

L11 ANSWER 19 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1974:140434 CAPLUS

DN 80:140434

ED Entered STN: 12 May 1984

TI Comparison between the chemical and electrochemical catalysis by tetraphenylporphyrin and phthalocyanine complexes

AU Manassen, J.

CS Dep. Plast. Res., Weizmann Inst. Sci., Rehovot, Israel

SO Journal of Catalysis (1974), 33(1), 133-7
CODEN: JCTLA5; ISSN: 0021-9517

DT Journal

LA English

CC 77-2 (Electrochemistry)
Section cross-reference(s): 67, 78

AB Catalytic electrodes were prepared by mixing C black, on which the catalyst (tetraphenylporphyrin) or phthalocyanine complexes) was precipitated, with a Teflon emulsion and painting the paste obtained on a 100-mesh metal gauze. Good wet-proofed electrodes (of possible use in fuel cells) were obtained by heating at 250° for 1 hr in Ar. O was passed over the electrode, in contact with the electrolyte, and current vs. potential curves were plotted and overvoltages were obtained from these curves. Complexes with Fe²⁺, Fe³⁺, Co²⁺ were studied. The influence of the fluorination of the phthalocyanine complexes is shown for Co and Fe phthalocyanine. The electrochem. reduction of H₂O₂ in the absence of O was also studied.

ST chem electrochem catalysis metal complex; tetraphenylporphyrin metal catalyst oxygen; phthalocyanine metal catalyst oxygen; iron complex catalysis redn oxygen; cobalt complex catalysis redn oxygen; copper complex catalysis redn oxygen

IT Electrodes
(fuel-cell, phthalocyanine and tetraphenylporphyrin complexes in)

IT Reduction, electrochemical

STN search for 10765,797

(of hydrogen peroxide and oxygen, tetraphenylporphyrin and phthalocyanine complexes on catalytic electrodes for)

IT Overvoltage
(of oxygen, on electrodes containing tetraphenylprophyrin or phthalocyanine complexes)

IT Fluorination
(of phthalocyanine complexes, reduction of hydrogen peroxides and oxygen by catalytic electrodes in relation to)

IT 132-16-1 147-14-8 3317-67-7 14172-90-8 14172-91-9 16591-56-3
23844-93-1 29484-63-7 34808-44-1 51772-46-4 51772-47-5
52629-20-6
RL: PRP (Properties)
(carbon black electrodes containing, oxygen overpotentials on)

IT 7722-84-1, reactions 7782-44-7, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reduction of, electrochem., catalytic electrodes for)

L11 ANSWER 20 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1974:119915 CAPLUS
DN 80:119915
ED Entered STN: 12 May 1984
TI Dehydrogenation reactions, catalyzed by metallophthalocyanines. Change of mechanism caused by electron attracting substituents on the catalyst
AU Bar Ilan, A.; Manassen, J.
CS Dep. Plast. Res., Weizmann Inst. Sci., Rehovot, Israel
SO Catal., Proc. Int. Congr., 5th (1973), Meeting Date 1972, Volume 2, 1149-58. Editor(s): Hightower, Joe W. Publisher: North-Holland, Amsterdam, Neth.
CODEN: 27VWAE

DT Conference
LA English
CC 22-5 (Physical Organic Chemistry)

AB A mixture of 1,4-cyclohexadiene and PhNO₂ was reacted over Co or Fe complexes with fluorinated and unsubstituted phthalocyanines at 240° to give C₆H₆, PhNH₂, and H₂O. The catalyst activity decreased (relative to the unsubstituted phthalocyanines) when tetrafluorophthalocyanines were used owing to the decrease in the rate of electron transfer from the catalyst to PhNO₂. The increase in the catalytic activity of the hexadecafluorophthalocyanine complexes (I) was attributed to a change in mechanism where the catalyst acted as an electron acceptor; 1,4-cyclohexadiene transferred an electron to the catalyst in the rate-determining step. The oxidative dehydrogenation of 1,4-cyclohexadiene gave C₆H₆ and H; PhNO₂ was not necessary for this reaction in the presence of I.

ST dehydrogenation cyclohexadiene phthalocyanine catalyst; mechanism catalytic dehydrogenation cyclohexadiene; cobalt phthalocyanine dehydrogenation cyclohexadiene; iron phthalocyanine dehydrogenation cyclohexadiene; fluorophthalocyanine dehydrogenation cyclohexadiene mechanism; nitrobenzene phthalocyanine dehydrogenation cyclohexadiene

IT Oxidation
(dehydrogenation and, of cyclohexadiene, mechanism of catalytic)

IT Dehydrogenation catalysts
(iron and cobalt phthalocyanines and fluorophthalocyanines, for cyclohexadiene, mechanism with)

IT Dehydrogenation
(oxidative, of cyclohexadiene, mechanism of catalytic)

IT 98-95-3, uses and miscellaneous
RL: USES (Uses)
(dehydrogenating agent, for cyclohexadiene over phthalocyanines and fluorophthalocyanines, mechanism of)

STN search for 10765,797

IT 132-16-1 3317-67-7 23844-93-1 52418-30-1 52629-20-6
52668-68-5
RL: CAT (Catalyst use); USES (Uses)
(dehydrogenation catalyst, for cyclohexadiene with nitrobenzene,
mechanism of)
IT 628-41-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(dehydrogenation of, over phthalocyanines and fluorophthalocyanines,
mechanism of)

=> d his

(FILE 'HOME' ENTERED AT 18:30:05 ON 23 FEB 2005)

FILE 'REGISTRY' ENTERED AT 18:30:26 ON 23 FEB 2005

L1 0 S PERFLUORO? AND SQUARYLIUM
L2 0 S PERFLUORO? AND CROCONATE
L3 0 S PERFLUORO? AND MEROCYANIN?
L4 8 S PERFLUORO? AND CYANIN?
L5 0 S PERFLUORO? AND INDOLIZIN?
L6 0 S PERFLUORO? AND PYRILIMUM?
L7 0 S PERFLUORO? AND PYRRILIUM?
L8 0 S PERFLUORO? AND THIOLIN?
L9 0 S PERFLUORO? AND DITHIOLIN?
L10 8 S L4

FILE 'CAPLUS' ENTERED AT 18:32:53 ON 23 FEB 2005

L11 20 S L10

=> log y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	59.85	168.50
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-14.60	-14.60

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NEWS 2 "Ask CAS" for self-help around the clock

Page 55by Examiner Cynthia Hamilton

STN search for 10765,797

NEWS 3 SEP 01 New pricing for the Save Answers for SciFinder Wizard within
STN Express with Discover!
NEWS 4 OCT 28 KOREAPAT now available on STN
NEWS 5 NOV 30 PHAR reloaded with additional data
NEWS 6 DEC 01 LISA now available on STN
NEWS 7 DEC 09 12 databases to be removed from STN on December 31, 2004
NEWS 8 DEC 15 MEDLINE update schedule for December 2004
NEWS 9 DEC 17 ELCOM reloaded; updating to resume; current-awareness
alerts (SDIs) affected
NEWS 10 DEC 17 COMPUAB reloaded; updating to resume; current-awareness
alerts (SDIs) affected
NEWS 11 DEC 17 SOLIDSTATE reloaded; updating to resume; current-awareness
alerts (SDIs) affected
NEWS 12 DEC 17 CERAB reloaded; updating to resume; current-awareness
alerts (SDIs) affected
NEWS 13 DEC 17 THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB
NEWS 14 DEC 30 EPFULL: New patent full text database to be available on STN
NEWS 15 DEC 30 CAPLUS - PATENT COVERAGE EXPANDED
NEWS 16 JAN 03 No connect-hour charges in EPFULL during January and
February 2005
NEWS 17 JAN 26 CA/CAPLUS - Expanded patent coverage to include the Russian
Agency for Patents and Trademarks (ROSPATENT)
NEWS 18 FEB 10 STN Patent Forums to be held in March 2005
NEWS 19 FEB 16 STN User Update to be held in conjunction with the 229th ACS
National Meeting on March 13, 2005

NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 13:11:01 ON 24 FEB 2005

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

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0.21

FILE 'REGISTRY' ENTERED AT 13:11:06 ON 24 FEB 2005

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STN search for 10765,797

provided by InfoChem.

STRUCTURE FILE UPDATES: 23 FEB 2005 HIGHEST RN 836595-43-8
DICTIONARY FILE UPDATES: 23 FEB 2005 HIGHEST RN 836595-43-8

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

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Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> s triflate

L1 745 TRIFLATE

=> d 745

L1 ANSWER 745 OF 745 REGISTRY COPYRIGHT 2005 ACS on STN

RN 333-27-7 REGISTRY

CN Methanesulfonic acid, trifluoro-, methyl ester (6CI, 7CI, 8CI, 9CI) (CA
INDEX NAME)

OTHER NAMES:

CN Methyl triflate

CN Methyl trifluoromethanesulfonate

CN NSC 270679

CN Trifluoromethanesulfonic acid methyl ester

FS 3D CONCORD

MF C2 H3 F3 O3 S

CI COM

LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS,
CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, GMELIN*,
MEDLINE, PROMT, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Other Sources: EINECS**, NDSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

DT.CA Caplus document type: Conference; Dissertation; Journal; Patent;
Preprint; Report

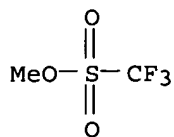
RL.P Roles from patents: PREP (Preparation); PROC (Process); RACT (Reactant
or reagent); USES (Uses)

RLD.P Roles for non-specific derivatives from patents: PREP (Preparation);
PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES
(Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological
study); FORM (Formation, nonpreparative); PREP (Preparation); PROC
(Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses);
NORL (No role in record)

RLD.NP Roles for non-specific derivatives from non-patents: PREP
(Preparation); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

STN search for 10765,797



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

792 REFERENCES IN FILE CA (1907 TO DATE)
13 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
801 REFERENCES IN FILE CAPLUS (1907 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s pentafluoroethanesulfonate
L2 8 PENTAFLUOROETHANESULFONATE

=> d 1-8

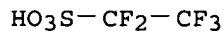
L2 ANSWER 1 OF 8 REGISTRY COPYRIGHT 2005 ACS on STN
RN 181070-96-2 REGISTRY
CN Ethanesulfonic acid, pentafluoro-, compd. with N,N-dimethylmethanamine
(1:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Methanamine, N,N-dimethyl-, pentafluoroethanesulfonate (9CI)
MF C3 H9 N . C2 H F5 O3 S
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAPLUS document type: Patent
RL.P Roles from patents: PREP (Preparation)

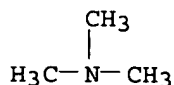
CM 1

CRN 354-88-1
CMF C2 H F5 O3 S



CM 2

CRN 75-50-3
CMF C3 H9 N



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 2 OF 8 REGISTRY COPYRIGHT 2005 ACS on STN
RN 78491-71-1 REGISTRY

STN search for 10765,797

CN Ethanesulfonic acid, pentafluoro-, compd. with morpholine (1:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Morpholine, pentafluoroethanesulfonate (9CI)

MF C4 H9 N O . C2 H F5 O3 S

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT
(*File contains numerically searchable property data)

DT.CA Caplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation)

CM 1

CRN 354-88-1

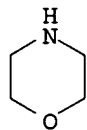
CMF C2 H F5 O3 S

HO₃S-CF₂-CF₃

CM 2

CRN 110-91-8

CMF C4 H9 N O



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 3 OF 8 REGISTRY COPYRIGHT 2005 ACS on STN

RN 27698-71-1 REGISTRY

CN Ethanesulfonic acid, pentafluoro-, trimethylsilyl ester (8CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Silanol, trimethyl-, pentafluoroethanesulfonate (8CI)

OTHER NAMES:

CN Silane, trimethyl[[(pentafluoroethyl)sulfonyl]oxy]-

FS 3D CONCORD

MF C5 H9 F5 O3 S Si

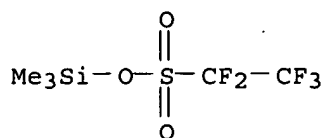
LC STN Files: BEILSTEIN*, CA, CAPLUS

(*File contains numerically searchable property data)

DT.CA Caplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation)

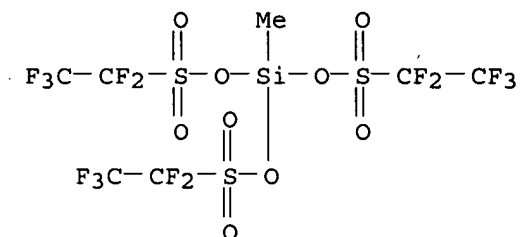
STN search for 10765,797



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 4 OF 8 REGISTRY COPYRIGHT 2005 ACS on STN
RN 27642-26-8 REGISTRY
CN Ethanesulfonic acid, pentafluoro-, methylsilylidyne ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Silanetriol, methyl-, tris(pentafluoroethanesulfonate) (8CI)
MF C7 H3 F15 O9 S3 Si
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)
DT.CA Caplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)

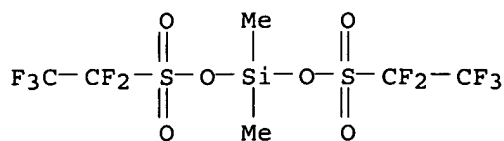


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 5 OF 8 REGISTRY COPYRIGHT 2005 ACS on STN
RN 27607-82-5 REGISTRY
CN Ethanesulfonic acid, pentafluoro-, dimethylsilylene ester (8CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Silanediol, dimethyl-, bis(pentafluoroethanesulfonate) (8CI)
OTHER NAMES:
CN Silane, dimethylbis([(pentafluoroethyl)sulfonyl]oxy)-
MF C6 H6 F10 O6 S2 Si
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)
DT.CA Caplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)

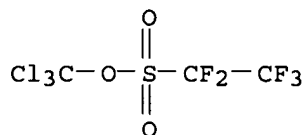
STN search for 10765,797



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 6 OF 8 REGISTRY COPYRIGHT 2005 ACS on STN
RN 24401-23-8 REGISTRY
CN Ethanesulfonic acid, pentafluoro-, trichloromethyl ester (8CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Methanol, trichloro-, pentafluoroethanesulfonate (8CI)**
FS 3D CONCORD
MF C3 Cl3 F5 O3 S
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)
DT.CA Caplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)

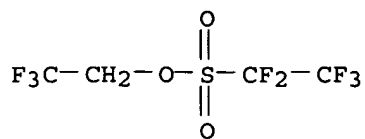


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 7 OF 8 REGISTRY COPYRIGHT 2005 ACS on STN
RN 6226-26-2 REGISTRY
CN Ethanesulfonic acid, pentafluoro-, 2,2,2-trifluoroethyl ester (7CI, 8CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Ethanol, 2,2,2-trifluoro-, pentafluoroethanesulfonate**
FS 3D CONCORD
MF C4 H2 F8 O3 S
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, IFICDB, IFIPAT, IFIUDB
(*File contains numerically searchable property data)
DT.CA Caplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation)
RL.NP Roles from non-patents: NORL (No role in record)

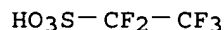
STN search for 10765,797



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 8 OF 8 REGISTRY COPYRIGHT 2005 ACS on STN
RN 2837-92-5 REGISTRY
CN Ethanesulfonic acid, pentafluoro-, potassium salt (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN Potassium pentafluoroethanesulfonate
CN Potassium perfluoroethanesulfonate
MF C2 H F5 O3 S . K
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB, USPAT2, USPATFULL
(*File contains numerically searchable property data)
DT.CA Caplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: PREP (Preparation); PRP (Properties)
CRN (354-88-1)



● K

9 REFERENCES IN FILE CA (1907 TO DATE)
9 REFERENCES IN FILE CAPLUS (1907 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s heptafluoropropyl
=> s heptafluoropropyl?
L3 4972 HEPTAFLUOROPROPYL?

=> s 13 and dye
529 DYE
L4 0 L3 AND DYE

=> s 13 and sulfonate
122222 SULFONATE
L5 13 L3 AND SULFONATE

=> d 1-3

L5 ANSWER 1 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN

STN search for 10765,797

RN 210979-56-9 REGISTRY

CN Methanesulfonic acid, trifluoro-, compd. with 4-
[(heptafluoropropyl)sulfinyl]-1,1'-biphenyl homopolymer (9CI) (CA
INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,1'-Biphenyl, 4-[(heptafluoropropyl)sulfinyl]-, homopolymer,
trifluoromethanesulfonate (9CI)

MF (C15 H9 F7 O S)x . x C H F3 O3 S

PCT Polyether, Polyether only

SR CA

LC STN Files: CA, CAPLUS

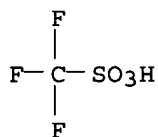
DT.CA Caplus document type: Patent

RL.P Roles from patents: PREP (Preparation); PRP (Properties)

CM 1

CRN 1493-13-6

CMF C H F3 O3 S



CM 2

CRN 210979-55-8

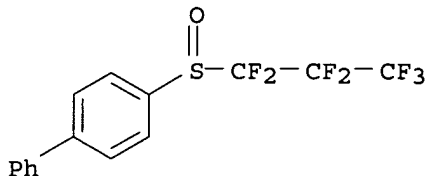
CMF (C15 H9 F7 O S)x

CCI PMS

CM 3

CRN 210979-54-7

CMF C15 H9 F7 O S



1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 2 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN

RN 207233-52-1 REGISTRY

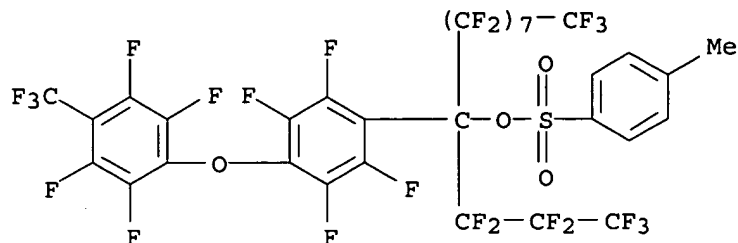
CN Benzenemethanol, 2,3,5,6-tetrafluoro- α -(heptafluorooctyl)-
 α -(heptafluoropropyl)-4-[2,3,5,6-tetrafluoro-4-
(trifluoromethyl)phenoxy]-, 4-methylbenzenesulfonate (9CI) (CA INDEX
NAME)

MF C32 H7 F35 O4 S

SR CA

STN search for 10765,797

LC STN Files: CA, CAPLUS
DT.CA CAPLUS document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)



****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 3 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 163255-32-1 REGISTRY
CN Benzenesulfonic acid, 4-ethenyl-, 2-[(heptafluoropropyl)sulfonyl]ethyl ester, telomer with 3-mercaptopropanoic acid (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Propanoic acid, 3-mercapto-, telomer with 2-[(heptafluoropropyl)sulfonyl]ethyl 4-ethenylbenzenesulfonate (9CI)
MF (C13 H11 F7 O5 S2)x . C3 H6 O2 S
CI COM
PCT Polystyrene
SR CA

CM 1

CRN 107-96-0
CMF C3 H6 O2 S

HS-CH₂-CH₂-CO₂H

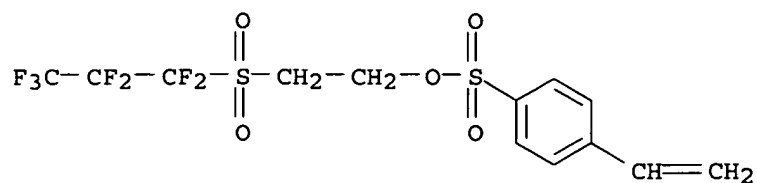
CM 2

CRN 163255-31-0
CMF (C13 H11 F7 O5 S2)x
CCI PMS

CM 3

CRN 146082-23-7
CMF C13 H11 F7 O5 S2

STN search for 10765,797

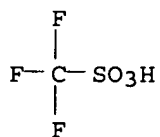


=> d 1-13

L5 ANSWER 1 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 210979-56-9 REGISTRY
CN Methanesulfonic acid, trifluoro-, compd. with 4-
[(heptafluoropropyl)sulfinyl]-1,1'-biphenyl homopolymer (9CI) (CA
INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,1'-Biphenyl, 4-[(heptafluoropropyl)sulfinyl]-, homopolymer,
trifluoromethanesulfonate (9CI)
MF (C15 H9 F7 O S)x . x C H F3 O3 S
PCT Polyether, Polyether only
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAPLUS document type: Patent
RL.P Roles from patents: PREP (Preparation); PRP (Properties)

CM 1

CRN 1493-13-6
CMF C H F3 O3 S



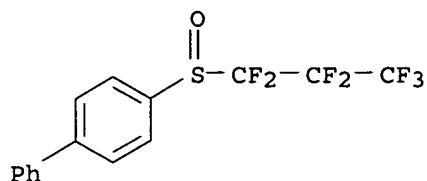
CM 2

CRN 210979-55-8
CMF (C15 H9 F7 O S)x
CCI PMS

CM 3

CRN 210979-54-7
CMF C15 H9 F7 O S

STN search for 10765,797



1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 2 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN

RN 207233-52-1 REGISTRY

CN Benzenemethanol, 2,3,5,6-tetrafluoro- α -(heptadecafluorooctyl)-
 α -(heptafluoropropyl)-4-[2,3,5,6-tetrafluoro-4-(trifluoromethyl)phenoxy]-, 4-methylbenzenesulfonate (9CI) (CA INDEX NAME)

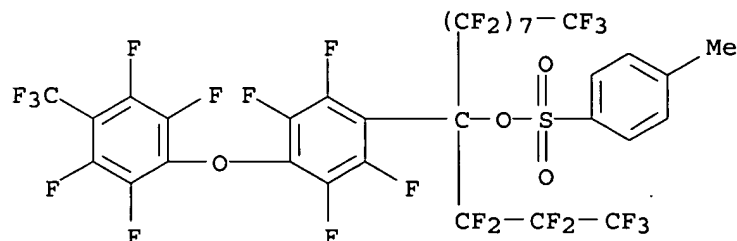
MF C32 H7 F35 O4 S

SR CA

LC STN Files: CA, CAPLUS

DT.CA Caplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 3 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN

RN 163255-32-1 REGISTRY

CN Benzenesulfonic acid, 4-ethenyl-, 2-[(heptafluoropropyl)sulfonyl]ethyl ester, telomer with 3-mercaptopropanoic acid (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Propanoic acid, 3-mercapto-, telomer with 2-[(heptafluoropropyl)sulfonyl]ethyl 4-ethenylbenzenesulfonate (9CI)

MF (C13 H11 F7 O5 S2)x . C3 H6 O2 S

CI COM

PCT Polystyrene

SR CA

CM 1

CRN 107-96-0

CMF C3 H6 O2 S

STN search for 10765,797

HS-CH₂-CH₂-CO₂H

CM 2

CRN 163255-31-0

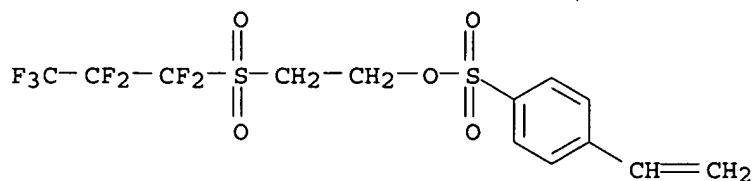
CMF (C13 H11 F7 O5 S2)x

CCI ,PMS

CM 3

CRN 146082-23-7

CMF C13 H11 F7 O5 S2



L5 ANSWER 4 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN

RN 146082-24-8 REGISTRY

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with
2-[(heptafluoropropyl)sulfonyl]ethyl 4-ethenylbenzenesulfonate, graft
(9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzenesulfonic acid, 4-ethenyl-, 2-[(heptafluoropropyl)sulfonyl]ethyl
1 ester, polymer with butyl 2-methyl-2-propenoate, graft (9CI)

MF (C13 H11 F7 O5 S2 . C8 H14 O2)x

CI PMS

PCT Polyacrylic, Polystyrene

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

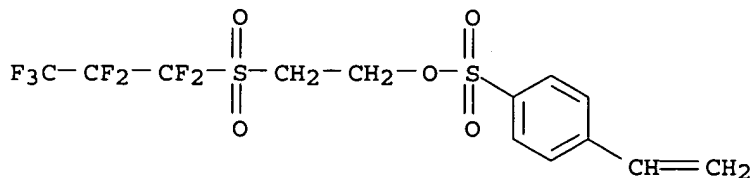
DT.CA Caplus document type: Patent

RL.P Roles from patents: PREP (Preparation); USES (Uses)

CM 1

CRN 146082-23-7

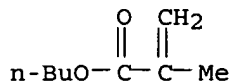
CMF C13 H11 F7 O5 S2



CM 2

STN search for 10765,797

CRN 97-88-1
CMF C8 H14 O2

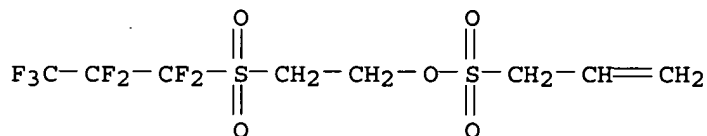


2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 5 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 145584-02-7 REGISTRY
CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with
2-[(heptafluoropropyl)sulfonyl]ethyl 2-propene-1-sulfonate, block (9CI)
(CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Propene-1-sulfonic acid, 2-[(heptafluoropropyl)sulfonyl]ethyl
ester, polymer with butyl 2-methyl-2-propenoate, block (9CI)
MF (C8 H14 O2 . C8 H9 F7 O5 S2)x
CI PMS
PCT Polyacrylic, Polyvinyl
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA Caplus document type: Patent
RL.P Roles from patents: USES (Uses)

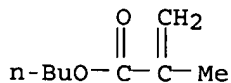
CM 1

CRN 145584-01-6
CMF C8 H9 F7 O5 S2



CM 2

CRN 97-88-1
CMF C8 H14 O2



2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

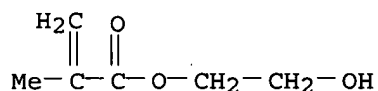
L5 ANSWER 6 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 145169-13-7 REGISTRY
CN Propanoic acid, 3-mercapto-, telomer with 2-

STN search for 10765,797

[(heptafluoropropyl)sulfonyl]ethyl 4-ethenylbenzenesulfonate,
2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzenesulfonic acid, 4-ethenyl-, 2-[(heptafluoropropyl)sulfonyl]ethyl
1 ester, telomer with 3-mercaptopropanoic acid, 2-[(2-methyl-1-oxo-2-
propenyl)oxy]ethyl ester (9CI)
MF (C13 H11 F7 O5 S2)x . x C6 H10 O3 . C3 H6 O2 S
PCT Polystyrene
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA Caplus document type: Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)
RLD.P Roles for non-specific derivatives from patents: PREP (Preparation)

CM 1

CRN 868-77-9
CMF C6 H10 O3

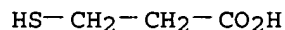


CM 2

CRN 163255-32-1
CMF (C13 H11 F7 O5 S2)x . C3 H6 O2 S

CM 3

CRN 107-96-0
CMF C3 H6 O2 S



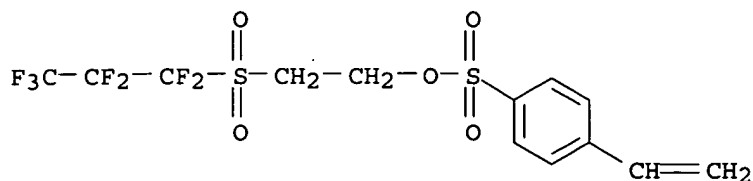
CM 4

CRN 163255-31-0
CMF (C13 H11 F7 O5 S2)x
CCI PMS

CM 5

CRN 146082-23-7
CMF C13 H11 F7 O5 S2

STN search for 10765,797

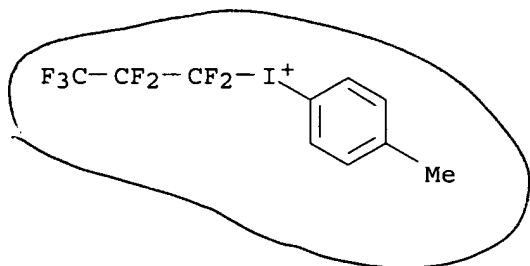


2 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 7 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 77758-82-8 REGISTRY
CN Iodonium, (heptafluoropropyl) (4-methylphenyl)-, benzenesulfonate (9CI) (CA INDEX NAME)
DR 105436-07-5
MF C10 H7 F7 I . C6 H5 O3 S
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL
DT.CA Caplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)
RL.NP Roles from non-patents: PREP (Preparation)

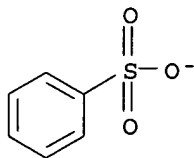
CM 1

CRN 46848-60-6
CMF C10 H7 F7 I



CM 2

CRN 3198-32-1
CMF C6 H5 O3 S



7 REFERENCES IN FILE CA (1907 TO DATE)
7 REFERENCES IN FILE CAPLUS (1907 TO DATE)

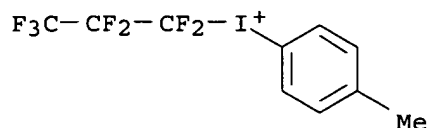
L5 ANSWER 8 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 77758-81-7 REGISTRY
CN Iodonium, (heptafluoropropyl) (4-methylphenyl)-, methanesulfonate (9CI) (CA INDEX NAME)

STN search for 10765,797

DR 105436-06-4
MF C10 H7 F7 I . C H3 O3 S
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL
DT.CA Caplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)
RL.NP Roles from non-patents: PREP (Preparation)

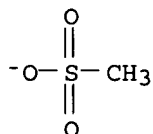
CM 1

CRN 46848-60-6
CMF C10 H7 F7 I



CM 2

CRN 16053-58-0
CMF C H3 O3 S



4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 9 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 76848-66-3 REGISTRY
CN 1H-Benzimidazolium, 1,3-diethyl-5-[(heptafluoropropyl)sulfonyl]-2-methyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

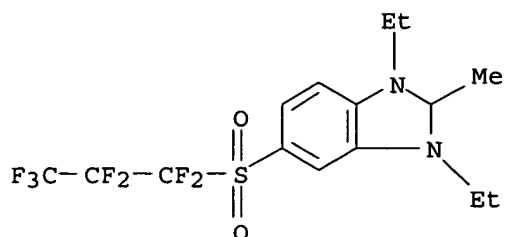
OTHER NAMES:

CN 1,3-Diethyl-2-methyl-5-(perfluoropropylsulfonyl)benzimidazolium p-toluenesulfonate
MF C15 H16 F7 N2 O2 S . C7 H7 O3 S
LC STN Files: CA, CAPLUS, CASREACT
DT.CA Caplus document type: Journal
RL.NP Roles from non-patents: RACT (Reactant or reagent)

CM 1

CRN 76848-65-2
CMF C15 H16 F7 N2 O2 S

STN search for 10765,797

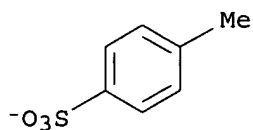


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 10 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN

RN 54245-60-2 REGISTRY

CN Benzenemethanol, 2,3,4,5,6-pentafluoro- α -(heptafluoropropyl)-, 4-methylbenzenesulfonate (9CI) (CA INDEX NAME)

FS 3D CONCORD

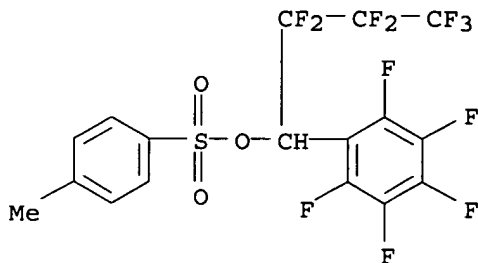
MF C17 H8 F12 O3 S

LC STN Files: BEILSTEIN*, CA, CAPLUS

(*File contains numerically searchable property data)

DT.CA Caplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation)



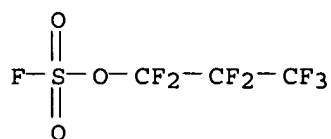
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

STN search for 10765,797

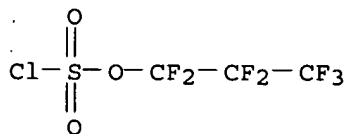
L5 ANSWER 11 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 662-98-6 REGISTRY
CN **Fluorosulfuric acid, heptafluoropropyl ester (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Propanol, 1,1,2,2,3,3,3-heptafluoro-, fluorosulfate (8CI)
CN 1-Propanol, heptafluoro-, fluorosulfate (7CI)
CN 1-Propanol, heptafluoro-, fluosulfonate (6CI)
OTHER NAMES:
CN **Perfluoropropyl fluorosulfonate**
FS 3D CONCORD
MF C3 F8 O3 S
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT
(*File contains numerically searchable property data)
DT.CA Caplus document type: Journal; Patent
RL.P Roles from patents: NORL (No role in record)
RL.NP Roles from non-patents: PREP (Preparation); NORL (No role in record)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

10 REFERENCES IN FILE CA (1907 TO DATE)
10 REFERENCES IN FILE CAPLUS (1907 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L5 ANSWER 12 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 662-97-5 REGISTRY
CN **Chlorosulfuric acid, heptafluoropropyl ester (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Propanol, 1,1,2,2,3,3,3-heptafluoro-, chlorosulfate (8CI)
CN 1-Propanol, heptafluoro-, chlorosulfate (7CI)
CN 1-Propanol, heptafluoro-, chlorosulfonate (6CI)
FS 3D CONCORD
MF C3 Cl F7 O3 S
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS
(*File contains numerically searchable property data)
DT.CA Caplus document type: Journal; Patent
RL.P Roles from patents: NORL (No role in record)
RL.NP Roles from non-patents: NORL (No role in record)

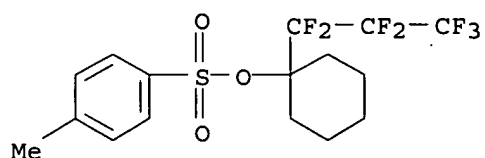


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

STN search for 10765,797

6 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)
5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L5 ANSWER 13 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 377-86-6 REGISTRY
CN Cyclohexanol, 1-(heptafluoropropyl)-, 4-methylbenzenesulfonate
(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Cyclohexanol, 1-(heptafluoropropyl)-, p-toluenesulfonate (6CI,
8CI)
MF C16 H17 F7 O3 S
LC STN Files: BEILSTEIN*, CAOLD
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s nonafluorobutyl?
L6 2832 NONAFLUOROBUTYL?

=> s 15 and sulfonate
122222 SULFONATE
L7 13 L5 AND SULFONATE

=> s 17 not 1
1784436 L
L8 13 L7 NOT L

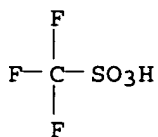
=> d 1-13

L8 ANSWER 1 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 210979-56-9 REGISTRY
CN Methanesulfonic acid, trifluoro-, compd. with 4-
[(heptafluoropropyl)sulfinyl]-1,1'-biphenyl homopolymer (9CI) (CA
INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,1'-Biphenyl, 4-[(heptafluoropropyl)sulfinyl]-, homopolymer,
trifluoromethanesulfonate (9CI)
MF (C15 H9 F7 O S)x . x C H F3 O3 S
PCT Polyether, Polyether only
SR CA
LC STN Files: CA, CAPLUS
DT.CA Caplus document type: Patent
RL.P Roles from patents: PREP (Preparation); PRP (Properties)

CM 1

STN search for 10765,797

CRN 1493-13-6
CMF C H F3 O3 S

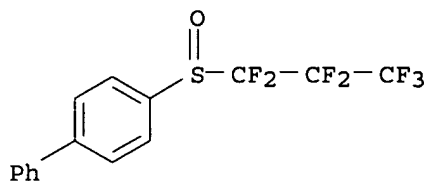


CM 2

CRN 210979-55-8
CMF (C15 H9 F7 O S)x
CCI PMS

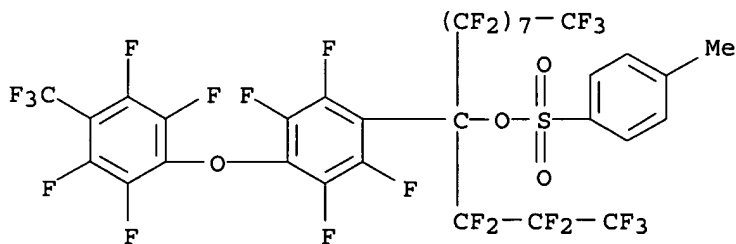
CM 3

CRN 210979-54-7
CMF C15 H9 F7 O S



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 2 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 207233-52-1 REGISTRY
CN Benzenemethanol, 2,3,5,6-tetrafluoro- α -(heptadecafluorooctyl)-
 α -(heptafluoropropyl)-4-[2,3,5,6-tetrafluoro-4-(trifluoromethyl)phenoxy]-, 4-methylbenzenesulfonate (9CI) (CA INDEX NAME)
MF C32 H7 F35 O4 S
SR CA
LC STN Files: CA, CAPLUS
DT.CA Caplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)



STN search for 10765,797

****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 3 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 163255-32-1 REGISTRY
CN Benzenesulfonic acid, 4-ethenyl-, 2-[(heptafluoropropyl)sulfonyl]ethyl ester, telomer with 3-mercaptopropanoic acid (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Propanoic acid, 3-mercapto-, telomer with 2-[(heptafluoropropyl)sulfonyl]ethyl 4-ethenylbenzenesulfonate (9CI)
MF (C13 H11 F7 O5 S2)x . C3 H6 O2 S
CI COM
PCT Polystyrene
SR CA

CM 1

CRN 107-96-0
CMF C3 H6 O2 S

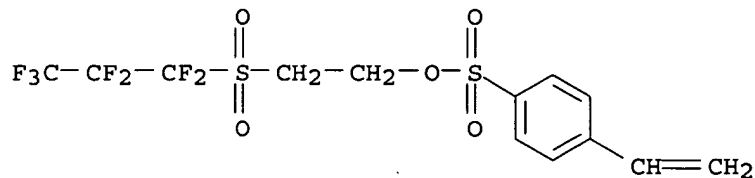
HS-CH₂-CH₂-CO₂H

CM 2

CRN 163255-31-0
CMF (C13 H11 F7 O5 S2)x
CCI PMS

CM 3

CRN 146082-23-7
CMF C13 H11 F7 O5 S2



L8 ANSWER 4 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 146082-24-8 REGISTRY
CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with 2-[(heptafluoropropyl)sulfonyl]ethyl 4-ethenylbenzenesulfonate, graft (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzenesulfonic acid, 4-ethenyl-, 2-[(heptafluoropropyl)sulfonyl]ethyl ester, polymer with butyl 2-methyl-2-propenoate, graft (9CI)
MF (C13 H11 F7 O5 S2 . C8 H14 O2)x
CI PMS

STN search for 10765,797

PCT Polyacrylic, Polystyrene

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

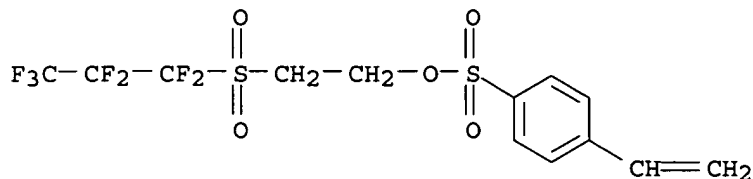
DT.CA Caplus document type: Patent

RL.P Roles from patents: PREP (Preparation); USES (Uses)

CM 1

CRN 146082-23-7

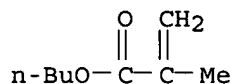
CMF C13 H11 F7 O5 S2



CM 2

CRN 97-88-1

CMF C8 H14 O2



2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 5 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN

RN 145584-02-7 REGISTRY

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with
2-[(heptafluoropropyl)sulfonyl]ethyl 2-propene-1-sulfonate, block (9CI)
(CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2-Propene-1-sulfonic acid, 2-[(heptafluoropropyl)sulfonyl]ethyl
ester, polymer with butyl 2-methyl-2-propenoate, block (9CI)

MF (C8 H14 O2 . C8 H9 F7 O5 S2)x

CI PMS

PCT Polyacrylic, Polyvinyl

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA Caplus document type: Patent

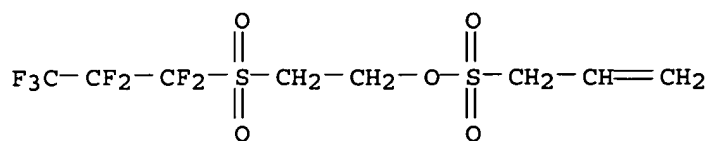
RL.P Roles from patents: USES (Uses)

CM 1

CRN 145584-01-6

CMF C8 H9 F7 O5 S2

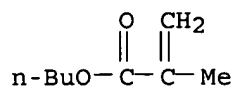
STN search for 10765,797



CM 2

CRN 97-88-1

CMF C8 H14 O2



2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 6 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN

RN 145169-13-7 REGISTRY

CN Propanoic acid, 3-mercapto-, telomer with 2-
[(heptafluoropropyl)sulfonyl]ethyl 4-ethenylbenzenesulfonate,
2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzenesulfonic acid, 4-ethenyl-, 2-[(heptafluoropropyl)sulfonyl]ethyl
1 ester, telomer with 3-mercaptopropanoic acid, 2-[(2-methyl-1-oxo-2-
propenyl)oxy]ethyl ester (9CI)

MF (C13 H11 F7 O5 S2)x . x C6 H10 O3 . C3 H6 O2 S

PCT Polystyrene

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA Caplus document type: Patent

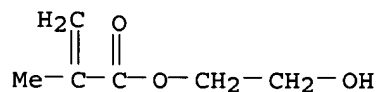
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

RLD.P Roles for non-specific derivatives from patents: PREP (Preparation)

CM 1

CRN 868-77-9

CMF C6 H10 O3



CM 2

CRN 163255-32-1

CMF (C13 H11 F7 O5 S2)x . C3 H6 O2 S

CM 3

CRN 107-96-0

STN search for 10765,797

CMF C3 H6 O2 S

HS-CH₂-CH₂-CO₂H

CM 4

CRN 163255-31-0

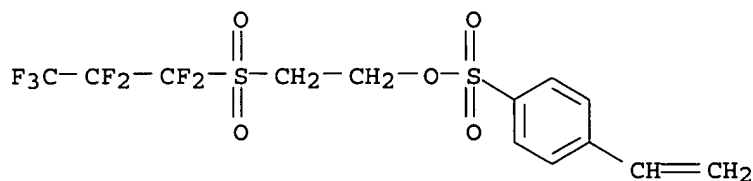
CMF (C13 H11 F7 O5 S2)x

CCI PMS

CM 5

CRN 146082-23-7

CMF C13 H11 F7 O5 S2



2 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 7 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN

RN 77758-82-8 REGISTRY

CN Iodonium, (heptafluoropropyl) (4-methylphenyl)-, benzenesulfonate
(9CI) (CA INDEX NAME)

DR 105436-07-5

MF C10 H7 F7 I . C6 H5 O3 S

LC STN Files: CA, CAPLUS, CASREACT, USPATFULL

DT.CA CAPLUS document type: Journal; Patent

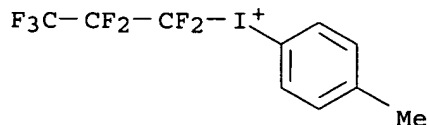
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

RL.NP Roles from non-patents: PREP (Preparation)

CM 1

CRN 46848-60-6

CMF C10 H7 F7 I

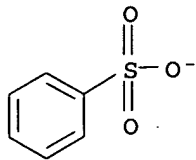


CM 2

CRN 3198-32-1

STN search for 10765,797

CMF C6 H5 O3 S

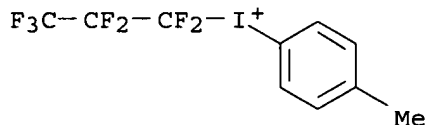


7 REFERENCES IN FILE CA (1907 TO DATE)
7 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 8 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 77758-81-7 REGISTRY
CN Iodonium, (heptafluoropropyl) (4-methylphenyl)-, methanesulfonate
(9CI) (CA INDEX NAME)
DR 105436-06-4
MF C10 H7 F7 I . C H3 O3 S
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL
DT.CA Caplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)
RL.NP Roles from non-patents: PREP (Preparation)

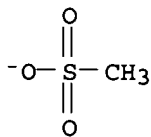
CM 1

CRN 46848-60-6
CMF C10 H7 F7 I



CM 2

CRN 16053-58-0
CMF C H3 O3 S



4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 9 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 76848-66-3 REGISTRY
CN 1H-Benzimidazolium, 1,3-diethyl-5-[(heptafluoropropyl)sulfonyl]-2-methyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

STN search for 10765,797

OTHER NAMES:

CN 1,3-Diethyl-2-methyl-5-(perfluoropropylsulfonyl)benzimidazolium
p-toluenesulfonate

MF C15 H16 F7 N2 O2 S . C7 H7 O3 S

LC STN Files: CA, CAPLUS, CASREACT

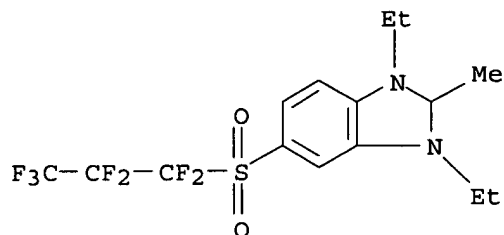
DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: RACT (Reactant or reagent)

CM 1

CRN 76848-65-2

CMF C15 H16 F7 N2 O2 S

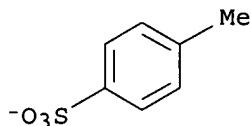


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 16722-51-3

CMF C7 H7 O3 S



1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 10 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN

RN 54245-60-2 REGISTRY

CN Benzenemethanol, 2,3,4,5,6-pentafluoro- α -(heptafluoropropyl)-,
4-methylbenzenesulfonate (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C17 H8 F12 O3 S

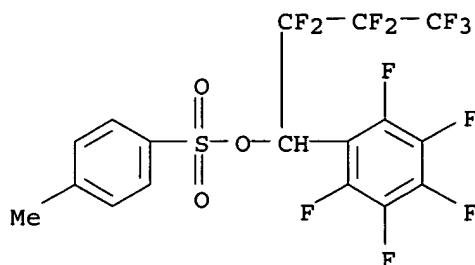
LC STN Files: BEILSTEIN*, CA, CAPLUS

(*File contains numerically searchable property data)

DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation)

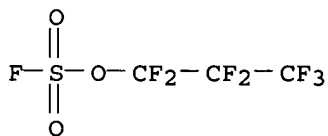
STN search for 10765,797



****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 11 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 662-98-6 REGISTRY
CN **Fluorosulfuric acid, heptafluoropropyl ester (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Propanol, 1,1,2,2,3,3,3-heptafluoro-, fluorosulfate (8CI)
CN 1-Propanol, heptafluoro-, fluorosulfate (7CI)
CN 1-Propanol, heptafluoro-, fluosulfonate (6CI)
OTHER NAMES:
CN **Perfluoropropyl fluorosulfonate**
FS 3D CONCORD
MF C3 F8 O3 S
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT
(*File contains numerically searchable property data)
DT.CA Caplus document type: Journal; Patent
RL.P Roles from patents: NORL (No role in record)
RL.NP Roles from non-patents: PREP (Preparation); NORL (No role in record)



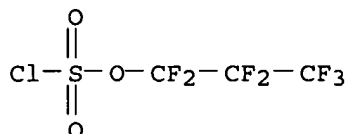
****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

10 REFERENCES IN FILE CA (1907 TO DATE)
10 REFERENCES IN FILE CAPLUS (1907 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L8 ANSWER 12 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 662-97-5 REGISTRY
CN **Chlorosulfuric acid, heptafluoropropyl ester (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1-Propanol, 1,1,2,2,3,3,3-heptafluoro-, chlorosulfate (8CI)
CN 1-Propanol, heptafluoro-, chlorosulfate (7CI)
CN 1-Propanol, heptafluoro-, chlorosulfonate (6CI)

STN search for 10765,797

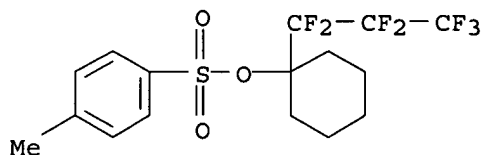
FS 3D CONCORD
MF C3 C1 F7 O3 S
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS
(*File contains numerically searchable property data)
DT.CA Caplus document type: Journal; Patent
RL.P Roles from patents: NORL (No role in record)
RL.NP Roles from non-patents: NORL (No role in record)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)
5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L8 ANSWER 13 OF 13 REGISTRY COPYRIGHT 2005 ACS on STN
RN 377-86-6 REGISTRY
CN Cyclohexanol, 1-(heptafluoropropyl)-, 4-methylbenzenesulfonate
(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Cyclohexanol, 1-(heptafluoropropyl)-, p-toluenesulfonate (6CI,
8CI)
MF C16 H17 F7 O3 S
LC STN Files: BEILSTEIN*, CAOLD
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d his

(FILE 'HOME' ENTERED AT 13:11:01 ON 24 FEB 2005)

FILE 'REGISTRY' ENTERED AT 13:11:06 ON 24 FEB 2005

L1 745 S TRIFLATE
L2 8 S PENTAFLUOROETHANESULFONATE
L3 4972 S HEPTAFLUOROPROPYL?
L4 0 S L3 AND DYE
L5 13 S L3 AND SULFONATE
L6 2832 S NONAFLUOROBUTYL?

STN search for 10765,797

L7 13 S L5 AND SULFONATE
L8 13 S L7 NOT L

=> s l7 or l5 or l2
L9 21 L7 OR L5 OR L2

=> file caplus
COST IN U.S. DOLLARS
FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
108.87	109.08

FILE 'CAPLUS' ENTERED AT 13:14:05 ON 24 FEB 2005
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE COVERS 1907 - 24 Feb 2005 VOL 142 ISS 9
FILE LAST UPDATED: 23 Feb 2005 (20050223/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l9
L10 42 L9

=> s l10 and (lithograph?)
43700 LITHOGRAPH?
L11 4 L10 AND (LITHOGRAPH?)

=> d all 1-4

L11 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1993:222814 CAPLUS
DN 118:222814
ED Entered STN: 29 May 1993
TI Electrophotographic lithographic master
IN Kato, Eiichi; Ishii, Kazuo
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 29 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G005-14
ICS G03G013-28
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI	JP 04198939	A2	19920720	JP 1990-325575	19901129
PRAI	JP 1990-325575		19901129		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
------------	-------	------------------------------------

JP 04198939	ICM	G03G005-14
	ICS	G03G013-28

AB In the title lithog. master obtained by electrophotog. using an electrophotog. plate utilizing ≥ 1 photoconductive layers and a claimed uppermost surface layer, the above surface layer contains ≥ 1 graft copolymers based on a monofunctional macromonomer (weight average mol. weight $\leq 2 + 104$) containing ≥ 1 polymer components containing F and(or) Si and functional groups capable of producing SO₃H, PO₃H₂, CO₂H, and(or) OH upon decomposition, and terminated at 1 end by CHa1:Cs2X1 [X1 = CO₂, OCO, (CH₂)_nOCO, 9CH₂)mCO₂, O, SO₂, CO, CONHCO₂, CONHCONH, CONd1, SO₂Nd1, phenylene (d1 = H, hydrocarbon; n, m = 1-4); a1, a2 = H, CN, hydrocarbon moiety, CO₂Z1, hydrocarbon-interposed CO₂Z1 = H, hydrocarbon moiety)]. The lithog. master shows good background stain resistance and good durability.

ST electrophotog lithog master surface layer

IT Acrylic polymers, uses

RL: USES (Uses)

(electrophotog. lithog. master surface layer from)

IT **Lithographic** plates

(electrophotog., surface layer of)

IT Electrophotographic photoconductors and photoreceptors

(surface layer of, for lithog. plates)

IT 144012-29-3 146057-58-1 146057-59-2

RL: USES (Uses)

(binder resin, electrophotog. lithog. master using)

IT 145814-98-8 146057-62-7 146057-64-9 146057-65-0 146057-67-2

146057-69-4 146057-72-9 146057-74-1 **146082-24-8**

146966-31-6 146966-32-7 146966-33-8

RL: USES (Uses)

(binder resin, for electrophotog. lithog. master)

IT 25499-05-2DP, carboxy-terminated, ester with 2-hydroxyethyl methacrylate
 145168-75-8DP, carboxy-terminated, ester with 2-hydroxyethyl methacrylate
 145168-83-8DP, carboxy-terminated, ester with 2-hydroxyethyl methacrylate
 145168-84-9P 145168-85-0DP, carboxy-terminated, ester with
 2-hydroxyethyl methacrylate 145168-89-4DP, carboxy-terminated, ester
 with 2-hydroxyethyl methacrylate 145168-90-7DP, carboxy-terminated,
 ester with 2-hydroxyethyl methacrylate 145168-91-8P 145168-93-0P
 145168-94-1DP, carboxy-terminated, ester with 2-hydroxyethyl methacrylate
 145168-95-2P 145168-98-5DP, carboxy-terminated, ester with
 2-hydroxyethyl methacrylate 145168-99-6DP, carboxy-terminated, ester
 with 2-hydroxyethyl methacrylate 145169-01-3DP, carboxy-terminated,
 ester with 2-hydroxyethyl methacrylate 145169-02-4DP,
 carboxy-terminated, ester with 2-hydroxyethyl methacrylate
 145169-03-5DP, carboxy-terminated, ester with 2-hydroxyethyl methacrylate
 145169-04-6DP, carboxy-terminated, ester with 2-hydroxyethyl methacrylate
 145169-05-7P 145169-12-6DP, carboxy-terminated, ester with
 2-hydroxyethyl methacrylate **145169-13-7DP**, carboxy-terminated,
 ester with 2-hydroxyethyl methacrylate 145169-14-8DP,
 carboxy-terminated, ester with 2-hydroxyethyl methacrylate 145169-16-0P
 145169-24-0P 145169-26-2DP, carboxy-terminated, ester with
 2-hydroxyethyl methacrylate 145169-30-8P 145807-38-1P 145807-41-6DP,
 carboxy-terminated, ester with 2-hydroxyethyl methacrylate 147013-37-4P
 147545-71-9DP, carboxy-terminated, ester with 2-hydroxyethyl methacrylate
 147545-79-7DP, carboxy-terminated, ester with 2-hydroxyethyl methacrylate

STN search for 10765,797

RL: PREP (Preparation)
(preparation of, as macromonomer)

L11 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1993:179948 CAPLUS
DN 118:179948
ED Entered STN: 01 May 1993
TI Electrophotographic lithographic printing plate
IN Kato, Eiichi
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G005-147
ICS G03G013-28
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 35

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04204539	A2	19920724	JP 1990-330769	19901130
	JP 2632241	B2	19970723		
PRAI	JP 1990-330769		19901130		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 04204539	ICM	G03G005-147
	ICS	G03G013-28

AB In an electrophotog. lithog. printing plate having ≥ 1 photoconductor layer on a conductive support and an uppermost surface layer, a binder resin in said surface layer comprises an A-B block copolymer, wherein the A block is composed of a monofunctional monomer unit (A), a functional group of which containing F and/or Si, is capable of forming sulfo, phosphono, carboxyl, and/or OH upon decomposition, and the B block is composed of at least a polymer component, a1HC:Ca2(X1R1) [$\text{X1} = \text{COO}, \text{OCO}, (\text{CH}_2)_n\text{OCO}, (\text{CH}_2)_m\text{COO}, \text{O}, \text{SO}_2, \text{CO}, \text{CONd1}, \text{SO}_2\text{Nd1}, \text{CONHCOO}, \text{CONHCONH}, \text{or } \text{C}_6\text{H}_4; m, n = 1-4; \text{R1} = \text{C1-18 aliphatic}, \text{C6-12 aromatic}; \text{a1,2} = \text{H, cyano, hydrocarbon}, \text{COOZ1}, \text{COOZ1 via hydrocarbon}$].

ST electrophotog lithog printing plate binder; binder resin lithog printing plate

IT Electrophotographic photoconductors and photoreceptors
(block copolymer binder resins in surface layer of)

IT Lithographic plates

(electrophotog., block copolymer binder resins in surface layer of)

IT 145583-90-0 145583-91-1 145583-92-2 145583-94-4 145583-98-8

145584-00-5 145584-02-7 145584-04-9 145584-07-2

146789-26-6 146789-28-8 146789-30-2 146789-32-4 146923-46-8

RL: USES (Uses)

(binder resin, surface layer of electrophotog. lithog. printing plate from)

IT 146863-87-8P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and use of, binder resin from, surface layer of electrophotog. lithog. printing plate from)

L11 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1993:179941 CAPLUS
DN 118:179941

STN search for 10765,797

ED Entered STN: 01 May 1993
TI Electrophotographic lithographic plate
IN Kato, Eiichi; Ishii, Kazuo
PA Fuji Shashin Film K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 27 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G005-05
ICS C08F283-00; C08F299-00; G03G005-08; G03G005-087; G03G013-28
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04067151	A2	19920303	JP 1990-179533	19900709
	US 5176975	A	19930105	US 1991-727166	19910709
PRAI	JP 1990-179533	A	19900709		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 04067151	ICM	G03G005-05
	ICS	C08F283-00; C08F299-00; G03G005-08; G03G005-087; G03G013-28

AB In an electrophotog. lithog. plate having ≥ 1 photoconductor layer containing photoconductive ZnO and a binder resin on a conductive support, the binder resin comprises a graft copolymer which contains ≥ 1 monofunctional macromonomer with weight average mol. weight $\leq 20,000$ made up of a polymer component (monomer) which contains F and/or Si and a functional group capable of releasing sulfo, phosphono, carboxyl, and/or hydroxyl upon decomposition and which is terminated at one end of the backbone chain with $a1HC:CHa2X1-$ [$X1 = COO, OCO, (CH2)n, OCO, (CH2)mCOO, O, SO2, CO, CONHCOO, CONHCONH, COND1, SO2ND1, C6H4; d1 = H, hydrocarbon; n, m = 1-4; a1,2 = H cyano, hydrocarbon, COOZ1, COOZ1$ via hydrocarbon; and $Z1 = H, hydrocarbon$].

ST electrophotog lithog plate binder resin

IT Electrophotographic photoconductors and photoreceptors
(binder resins for, for lithog. plates)

IT **Lithographic plates**

(electrophotog., binder resins for)

IT	25499-05-2P	145168-75-8P	145168-83-8P	145168-84-9P	145168-85-0P
	145168-89-4P	145168-90-7P	145168-91-8P	145168-93-0P	145168-94-1P
	145168-95-2P	145168-98-5P	145168-99-6P	145169-01-3P	145169-02-4P
	145169-03-5P	145169-04-6P	145169-05-7P	145169-12-6P	
	145169-13-7P	145169-14-8P	145169-16-0P	145169-24-0P	
	145169-26-2P	145169-30-8P	145807-38-1P	145807-41-6P	147013-36-3P
	147013-37-4P	147545-79-7P			

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(preparation and reaction of, binder resin from, electrophotog. lithog.
plate containing)

IT	144012-29-3P	145814-98-8P	146057-58-1P	146057-59-2P	146057-60-5P
	146057-62-7P	146057-64-9P	146057-65-0P	146057-67-2P	146057-69-4P
	146057-70-7P	146057-72-9P	146057-74-1P	146082-24-8P	
	146116-82-7P				

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and use of, binder resin from, electrophotog. lithog. plate
containing)

L11 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

STN search for 10765,797

AN 1993:70175 CAPLUS
DN 118:70175
ED Entered STN: 16 Feb 1993
TI Electrophotographic material for lithographic plate preparation
IN Kato, Eiichi
PA Fuji Photo Film Co., Ltd., Japan
SO Eur. Pat. Appl., 59 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM G03G005-05
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 484978	A1	19920513	EP 1991-119092	19911108
	EP 484978	B1	19950927		
	R: DE, GB				
	JP 04175761	A2	19920623	JP 1990-302480	19901109
	JP 2632240	B2	19970723		
	US 5258249	A	19931102	US 1991-779915	19911021
PRAI	JP 1990-302480	A	19901109		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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EP 484978	ICM	G03G005-05
EP 484978	ECLA	G03G005/05C8; G03G005/05C6

AB An electrophotog. material for lithog. plate preparation comprises a conductive support provided thereon ≥ 1 photoconductive layer containing photoconductive ZnO particles and a binder resin, wherein the binder resin contains ≥ 1 AB block copolymer composed of an A block comprising a polymer component corresponding to a monofunctional monomer containing a functional group having a F and/or Si atom and capable of forming ≥ 1 hydrophilic group selected from sulfo, phosphono, carboxy, and hydroxy through decomposition and a B block containing ≥ 1 polymer component represented by the formula-[CHR₁CR₂(XR₃)]- [X = CO₂, OCO, (CH₂)_mOCO<(CH₂)_nCO₂, O, SO₂, CO, CONR₄, SO₂NR₄, CONHCO₂, CONHCONH, or C₆H₄ where R₄ = H or a hydrocarbon group; m, n = an integer of 1-4; R₁, R₂ = H, halogen, cyano, a hydrocarbon group, CO₂R₅, or CO₂R₅ bonded via a hydrocarbon group where R₅ = a hydrocarbon group which may be substituted; R₃ = a C1-18 aliphatic group or a C6-12 aromatic group]. The electrophotog. material has excellent electrostatic characteristics and provides a lithog. plate having excellent printing durability.

ST electrophotog photoreceptor lithog plate prepn; zinc oxide electrophotog photoconductor lithog; vinyl black copolymer lithog plate

IT Electrophotographic photoconductors and photoreceptors

(containing zinc oxide and vinyl block copolymers for lithog. plate preparation)

IT Lithographic plates

(electrophotog. photoreceptors containing zinc oxide and vinyl block copolymers for preparation of)

IT 1314-13-2, Zinc oxide, uses

RL: USES (Uses)

(electrophotog. photoreceptors containing vinyl block copolymers and, for preparation of lithog. plates)

IT 145583-90-0 145583-91-1 145583-92-2 145583-94-4 145583-96-6

145583-98-8 145584-00-5 145584-02-7 145584-04-9

145584-06-1 145584-07-2 145584-09-4 145584-11-8 145584-13-0

RL: USES (Uses)

STN search for 10765,797

(electrophotog. photoreceptors containing zinc oxide and, for lithog. plate preparation)

=> d his

(FILE 'HOME' ENTERED AT 13:11:01 ON 24 FEB 2005)

FILE 'REGISTRY' ENTERED AT 13:11:06 ON 24 FEB 2005

L1 745 S TRIPLATE
L2 8 S PENTAFLUOROETHANESULFONATE
L3 4972 S HEPTAFLUOROPROPYL?
L4 0 S L3 AND DYE
L5 13 S L3 AND SULFONATE
L6 2832 S NONAFLUOROBUTYL?
L7 13 S L5 AND SULFONATE
L8 13 S L7 NOT L
L9 21 S L7 OR L5 OR L2

FILE 'CAPLUS' ENTERED AT 13:14:05 ON 24 FEB 2005

L10 42 S L9
L11 4 S L10 AND (LITHOGRAPH?)

=> s l10 not l11

L12 38 L10 NOT L11

=> d all 1-38

L12 ANSWER 1 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:971750 CAPLUS
DN 140:17339
ED Entered STN: 14 Dec 2003
TI Preparing a fire resistant polycarbonate composition and reducing haze, color, and inclusions
IN Hoeks, Theodorus Lambertus; Kusters, Adrianus A. M.
PA Neth.
SO U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM C08L069-00
NCL 524155000
CC 37-6 (Plastics Manufacture and Processing)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003229165	A1	20031211	US 2002-64073	20020607
PRAI	US 2002-64073		20020607		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2003229165	ICM	C08L069-00
	NCL	524155000

OS MARPAT 140:17339

AB Producing a fire-resistant polycarbonate composition comprises preparing an aqueous

solution of a flame retardant salt, and compounding the aqueous solution of the flame retardant salt with a polycarbonate composition to form the fire-resistant polycarbonate composition. The process reduces the level of haze, color and inclusions, compared to fire resistant polycarbonate

STN search for 10765,797

comps. compounded with the same flame retardant salt in solid form.
Polycarbonate composition containing 20% aqueous K diphenylsulfon-3-sulfonate
salt
solution showed inclusions 29/10 cm3 yellowness index 0.95, and haze 0.95;
vs. 61, 1.1, and 1.75, resp., for polycarbonate without salt solution
ST polycarbonate extrudate aq alk salt soln additive
IT Polycarbonates, properties
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(brominated; fire retardant alkaline salt solution for polycarbonate
composition
for reducing haze, color, and inclusions)
IT Transparent materials
(fire retardant alkaline salt solution for polycarbonate composition for
reducing
haze, color, and inclusions)
IT Polycarbonates, properties
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(fire retardant alkaline salt solution for polycarbonate composition for
reducing
haze, color, and inclusions)
IT Fireproofing agents
(salt; fire retardant alkaline salt solution for polycarbonate composition
for
reducing haze, color, and inclusions)
IT Fire-resistant materials
(sheets; fire retardant alkaline salt solution for polycarbonate
composition for
reducing haze, color, and inclusions)
IT 657-84-1 2795-39-3, Potassium perfluorooctanesulfonate 2837-92-5
, Potassium perfluoroethanesulfonate 2923-21-9, Sodium
perfluoroethanesulfonate 2926-27-4 2926-30-9 3871-99-6, Potassium
perfluorohexane sulfonate 3872-25-1 4021-47-0, Sodium
perfluorooctanesulfonate 16106-44-8 21934-50-9, Sodium
perfluoroheptane sulfonate 29420-49-3 39616-92-7 60270-55-5,
Potassium perfluoroheptane sulfonate 60453-92-1 63316-43-8
82382-12-5 630402-22-1 630404-39-6 630404-40-9 630404-41-0
630404-42-1
RL: MOA (Modifier or additive use); USES (Uses)
(fire retardant alkaline salt solution for polycarbonate composition for
reducing
haze, color, and inclusions)

L12 ANSWER 2 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:832899 CAPLUS

DN 137:339793

ED Entered STN: 01 Nov 2002

TI Functional fluids with servo valve erosion resistance

IN Poirier, Marc-Andre; Antika, Shlomo

PA ExxonMobil Research and Engineering Company, USA

SO PCT Int. Appl., 16 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C10M135-10

ICS C10M169-04

CC 51-8 (Fossil Fuels, Derivatives, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002086035	A1	20021031	WO 2002-US12838	20020412

STN search for 10765,797

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ,
VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2443961 AA 20021031 CA 2002-2443961 20020412
US 2003040443 A1 20030227 US 2002-122049 20020412
EP 1397471 A1 20040317 EP 2002-721804 20020412

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRAI US 2001-285105P P 20010420
US 2002-122049 A 20020412
WO 2002-US12838 W 20020412

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002086035	ICM	C10M135-10
	ICS	C10M169-04
AB	Phosphate ester fluids used in transmitting power in aircraft hydraulic systems are enhanced by incorporating an erosion inhibiting amount of an additive or mixture having the formula RSO ₃ M, where M is preferably an alkali metal, such as Li, Na, K, Ce, or ammonium ion. The R group is a perfluorinated C1-12 hydrocarbyl group, preferably a C1-8 hydrocarbyl group, which may be linear or branched. Suitable additives include potassium 1,1,2,2,3,3,4,4,4-nonafluorobutane-1-sulfonic acid.	
ST	aircraft hydraulic fluid anti erosion additive	
IT	Sulfonic acids, uses	
	RL: MOA (Modifier or additive use); USES (Uses) (alkanesulfonic, perfluoro, salts, alkali metal salts; functional fluids with servo valve erosion resistance for aircraft hydraulic systems)	
IT	Hydraulic fluids	
	(anti-erosion additives; functional fluids with servo valve erosion resistance for aircraft hydraulic systems)	
IT	Aircraft	
	(functional fluids with servo valve erosion resistance for aircraft hydraulic systems)	
IT	Alkali metal hydroxides	
	Sulfonic acids, reactions	
	RL: RCT (Reactant); RACT (Reactant or reagent) (functional fluids with servo valve erosion resistance for aircraft hydraulic systems)	
IT	Quaternary ammonium compounds, uses	
	RL: MOA (Modifier or additive use); USES (Uses) (perfluoroalkylsulfonates; functional fluids with servo valve erosion resistance for aircraft hydraulic systems)	
IT	12751-11-0, FC 98	
	RL: MOA (Modifier or additive use); USES (Uses) (FC 98; functional fluids with servo valve erosion resistance for aircraft hydraulic systems)	
IT	90-30-2 122-39-4, Diphenylamine, uses 122-39-4D, Diphenylamine, octylated 128-37-0, 2,6-Di-tert-butyl-4-methyl phenol, uses 537-65-5, 4,4'-Diaminodiphenylamine 2795-39-3 2837-92-5 2926-27-4, Potassium trifluoromethanesulfonate 3871-99-6 3872-25-1 6683-19-8, Tetrakis[methylene(3,5-di-tert-butyl-4-hydroxyhydrocinnamate)] methane 7439-93-2D, Lithium, perfluoroalkylsulfonates 7440-09-7D, Potassium,	

STN search for 10765,797

perfluoroalkylsulfonates 7440-17-7D, Rubidium, perfluoroalkylsulfonates
7440-46-2D, Cesium, perfluoroalkylsulfonates 14798-03-9D, Ammonium,
perfluoroalkylsulfonates 29420-49-3 33454-82-9, Lithium
trifluoromethanesulfonate 40365-23-9 60270-55-5 76434-14-5,
Ditolylamine

RL: MOA (Modifier or additive use); USES (Uses)

(functional fluids with servo valve erosion resistance for aircraft
hydraulic systems)

IT 67-56-1, Methanol, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(functional fluids with servo valve erosion resistance for aircraft
hydraulic systems)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Kinker; US 5817606 A 1998 CAPLUS

(2) Mackinnon; US 4324674 A 1982 CAPLUS

(3) Placek; US 6030543 A 2000 CAPLUS

(4) Smith; US 3679587 A 1972 CAPLUS

L12 ANSWER 3 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:732457 CAPLUS

DN 138:187380

ED Entered STN: 27 Sep 2002

TI Perfluoroalkylsulfone reactions with nucleophiles

AU Barrera, Michael D.; Cheburkov, Yuri; Lamanna, William M.

CS 3M Company, 3M Center, St. Paul, MN, 55144, USA

SO Journal of Fluorine Chemistry (2002), 117(1), 13-16

CODEN: JFLCAR; ISSN: 0022-1139

PB Elsevier Science B.V.

DT Journal

LA English

CC 23-11 (Aliphatic Compounds)

OS CASREACT 138:187380

AB Perfluorodialkylsulfones were found to react readily with metal hydroxides
in water or alc. solution and with ammonia to form fluorinated sulfonic acid
derivs.

ST perfluoroalkyl sulfone purifn reaction nucleophile; fluorinated sulfonic
acid salt prepn

IT Nucleophiles

(perfluorodialkylsulfone reactions with nucleophiles)

IT Sulfones

RL: RCT (Reactant); RACT (Reactant or reagent)

(perfluorodialkylsulfones; perfluorodialkylsulfone reactions with
nucleophiles)

IT 14930-22-4P

RL: PUR (Purification or recovery); RCT (Reactant); PREP (Preparation);
RACT (Reactant or reagent)

(perfluorodialkylsulfone reactions with nucleophiles)

IT 354-33-6P, Pentafluoroethane 2837-92-5P, Potassium

perfluoroethanesulfonate 2923-21-9P, Sodium perfluoroethanesulfonate

33454-82-9P, Lithium triflate 78491-70-0P

RL: SPN (Synthetic preparation); PREP (Preparation)

(perfluorodialkylsulfone reactions with nucleophiles)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Abe, T; J Fluorine Chem 1973-1974, V3, P17 CAPLUS

(2) Anolick, C; US 5637663 1997 CAPLUS

(3) Burger, H; J Fluorine Chem 1979, V13, P251

(4) Geisler, K; J Fluorine Chem 1984, V24, P17 CAPLUS

(5) Hansen, J; US 5486271 1994 CAPLUS

STN search for 10765,797

- (6) Harmon, L; J Chem Soc, Perkin Trans 1979, V1, P2675
- (7) Hendrickson, J; J Am Chem Soc 1974, V96, P2275 CAPLUS
- (8) Hu, L; Inorg Chem 1993, V32, P5007 CAPLUS
- (9) Imagawa, T; Inorg Chem 1983, V22, P969 CAPLUS
- (10) Knunyants, I; Dokl Akad Nauk SSSR 1961, V137, P1121 CAPLUS
- (11) Oberhammer, H; J Mol Struct 1982, V82, P143 CAPLUS
- (12) Raasch, M; J Org Chem 1980, V45, P2151 CAPLUS
- (13) Rozhkov, I; Izv Akad Nauk SSSR, Ser Khim 1969, V4, P945
- (14) Shein, S; Zh Obshei Khim 1966, V36, P2141 CAPLUS
- (15) Steensma, R; Tetrahedron Lett 2001, V42, P2281 CAPLUS
- (16) Temple, S; J Org Chem 1968, V33, P344 CAPLUS

L12 ANSWER 4 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:504858 CAPLUS

DN 137:63975

ED Entered STN: 05 Jul 2002

TI Method for reducing haze in fire resistant polycarbonate compositions

IN Gohr, Eric Thomas; Rosenquist, Niles Richard; Singh, Rajendra Kashinath;
Stoddard, Gregory James; Zarkoob, Shahrzad; Goossens, Johannes Martinus
Dina

PA General Electric Company, USA

SO PCT Int. Appl., 19 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C08K005-00

CC 37-6 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002051923	A2	20020704	WO 2001-US44160	20011126
	WO 2002051923	A3	20020919		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	US 2002123544	A1	20020905	US 2000-749645	20001227
	US 6730720	B2	20040504		
	DE 10197122	T	20031211	DE 2001-10197122	20011126
	JP 2004516376	T2	20040603	JP 2002-553408	20011126
	US 2004132865	A1	20040708	US 2003-740074	20031217
PRAI	US 2000-749645	A	20001227		
	WO 2001-US44160	W	20011126		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002051923	ICM	C08K005-00
US 2002123544	ECLA	C08J003/22L69+L69/00; C08L069/00+B4
JP 2004516376	FTERM	4F070/AA50; 4F070/AC34; 4F070/AC50; 4F070/AC52; 4F070/AE01; 4F070/AE02; 4F070/AE03; 4F070/AE05; 4F070/AE07; 4F070/AE17; 4F070/FB03; 4J002/CG001; 4J002/DA018; 4J002/DE238; 4J002/DJ018; 4J002/DJ028; 4J002/DJ048; 4J002/DL008; 4J002/EE039; 4J002/EJ019; 4J002/EJ029; 4J002/EU179; 4J002/EV236; 4J002/EW049; 4J002/EW069; 4J002/EW129; 4J002/EX037; 4J002/FA048;

STN search for 10765,797

4J002/FD020; 4J002/FD100; 4J002/FD136; 4J002/FD160

OS MARPAT 137:63975

AB A method to reduce haze in the production of fire resistant polycarbonate compns. comprising flame retardant salts, wherein the salt is blended with a first polycarbonate to form a concentrate, and the concentrate is then added to a second polycarbonate resin. Thus, a composition comprising polycarbonate resin having MW 21,8000 54.45, polycarbonate resin having MW 30,500 35, octaphenyltetrasiloxane 0.1, pentaerythritol stearate 0.35, phosphite stabilizer 0.1, and concentrate (1% KPFBs in polycarbonate resin) 10% were blended, extruded to give pellets, and injection molded into a 3.2 mm-thick test piece showing melt volume ratio (MVR, ASTM D 1238) 15.2, transmittance (ASTM D 1003) 90.5%, YI (ASTM D 1925) 1.7, haze (ASTM D 1003) 0.7, and UL-94 V-0.

ST transparent fire resistant polycarbonate contg perfluoroalkane salt cyclosiloxane

IT Fire-resistant materials

Fireproofing agents

Transparent materials

(method for reducing haze in fire resistant polycarbonate compns.)

IT Cyclosiloxanes

RL: MOA (Modifier or additive use); USES (Uses)

(method for reducing haze in fire resistant polycarbonate compns.)

IT Polycarbonates, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(method for reducing haze in fire resistant polycarbonate compns.)

IT Polymer blends

RL: TEM (Technical or engineered material use); USES (Uses)

(method for reducing haze in fire resistant polycarbonate compns.)

IT 2795-39-3 2837-92-5, Potassium perfluoroethanesulfonate

2923-21-9, Sodium perfluoroethanesulfonate 2926-27-4 2926-30-9

3871-99-6, Potassium perfluorohexanesulfonate 4021-47-0 17026-44-7,

Ammonium sulfonate 21934-50-9, Sodium perfluoroheptanesulfonate

25628-08-4, Tetraethylammonium perfluorobutanesulfonate 29420-49-3,

Potassium perfluorobutanesulfonate 35895-69-3 39616-92-7 40365-23-9

56773-42-3 60270-55-5, Potassium perfluoroheptanesulfonate 60453-92-1,

Sodium perfluorobutanesulfonate 63316-43-8, Potassium

diphenylsulfone-3-sulfonate 82382-12-5 108410-38-4 108427-55-0

359868-82-9 439863-96-4 439863-97-5 439863-99-7

RL: MOA (Modifier or additive use); USES (Uses)

(fireproofing agent; method for reducing haze in fire resistant polycarbonate compns.)

IT 540-97-6, Dodecamethylcyclotetrasiloxane 541-02-6,

Decamethylcyclotetrasiloxane 541-05-9, Hexamethylcyclotetrasiloxane

546-45-2, Trimethyltriphenylcyclotetrasiloxane 546-56-5,

Octaphenylcyclotetrasiloxane 556-67-2, Octamethylcyclotetrasiloxane

35860-44-7, Tetramethyltetraphenylcyclotetrasiloxane

RL: MOA (Modifier or additive use); USES (Uses)

(method for reducing haze in fire resistant polycarbonate compns.)

L12 ANSWER 5 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1998:430834 CAPLUS

DN 129:149399

ED Entered STN: 13 Jul 1998

TI Poly(arylene sulfonium salts) useful for electrolytes and proton generators by irradiation

IN Tsuchida, Hidetoshi; Yamamoto, Kimitoshi; Miyatake, Kenji; Endo, Kazuhisa

PA Foundation for Scientific Technology Promotion, Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

STN search for 10765,797

CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08G075-02
ICS C07C381-12
CC 35-7 (Chemistry of Synthetic High Polymers)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10182824	A2	19980707	JP 1996-351640	19961227
	JP 3130818	B2	20010131		
PRAI	JP 1996-351640		19961227		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 10182824	ICM	C08G075-02
	ICS	C07C381-12

AB The poly(arylene sulfonium salts) are [ArS+(Rf)X-]_n (Ar is aromatic or heterocyclic compds.; Rf is F-containing organic groups; X- is anion; n ≥ 2). The compds. are useful for polymer electrolytes, electrophilic fluoro-alkylation or arylation reagents, and precursors for aromatic polythioethers (no data). Thus, 0.04 mol 4-trifluoromethylsulfinylbiphenyl was stirred overnight with 0.04 mol (CF₃SO₂)₂O in CF₃SO₃H and precipitated to give 100%

poly(trifluoromethylsulfonium-

1,4-phenylene-1,4-phenylene) trifluoromethanesulfate.

ST polyarylene sulfonium salt prepn; trifluoromethylsulfinylbiphenyl trifluoromethanesulfonic acid anhydride reaction; polytrifluoromethylsulfoniumphenylenephénylene trifluoromethanesulfate

IT Polyelectrolytes

(preparation of poly(arylene sulfonium salts) useful for electrolytes and proton generators by irradiation)

IT 210979-46-7P 210979-48-9P 210979-51-4P 210979-53-6P

210979-56-9P 210979-58-1P 210979-60-5P

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)

(preparation of poly(arylene sulfonium salts) useful for electrolytes and proton generators by irradiation)

IT 358-23-6, Trifluoromethanesulfonic acid anhydride 1493-13-6

25212-74-2, Polythiophénylene

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of poly(arylene sulfonium salts) useful for electrolytes and proton generators by irradiation)

L12 ANSWER 6 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1998:210377 CAPLUS

DN 128:321424

ED Entered STN: 15 Apr 1998

TI p-Toluenesulfonyl esters of perfluorinated tertiary alcohols: crystal structure determination of the absolute configuration of C₆F₅(CF₃)₂COSO₂C₆H₄CH₃

AU Krumm, Burkhard; Vij, Ashwani; Kirchmeier, Robert L.; Shreeve, Jean'ne M.

CS Dep. of Chem., Univ. of Idaho, Moscow, ID, 83844-2343, USA

SO Journal of Fluorine Chemistry (1998), 89(1), 19-22

CODEN: JFLCAR; ISSN: 0022-1139

PB Elsevier Science S.A.

DT Journal

LA English

CC 25-13 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

OS CASREACT 128:321424

AB Selected perfluorinated tertiary alcs. were reacted with p-toluenesulfonyl

STN search for 10765,797

chloride to form their p-toluenesulfonyl esters C6F5(CF3)2COSO2C6H4CH3 (I), CF3C6F4OC6F4(C3F7)(C8F17)COSO2C6H4CH3 and (CF3C6F4OC6F4)2(C7F15)COSO2C6H4CH3. The absolute configuration of I is established by X-ray diffraction.

ST toluenesulfonyl ester prepn perfluorinated tertiary alc; X ray diffraction toluenesulfonyl ester configuration; esterification toluenesulfonyl chloride tertiary alc

IT Esterification

(p-Toluenesulfonyl esters of perfluorinated tertiary alcs.: crystal structure determination of the absolute configuration of

C6F5(CF3)2COSO2C6H4CH3)

IT Alcohols, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(tertiary, perfluorinated; p-Toluenesulfonyl esters of perfluorinated tertiary alcs.: crystal structure determination of the absolute

configuration of

C6F5(CF3)2COSO2C6H4CH3)

IT 98-59-9, p-Toluenesulfonyl chloride 13732-52-0 185697-29-4 207233-54-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(p-Toluenesulfonyl esters of perfluorinated tertiary alcs.: crystal structure determination of the absolute configuration of

C6F5(CF3)2COSO2C6H4CH3)

IT 207233-51-0P 207233-52-1P 207233-53-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(p-Toluenesulfonyl esters of perfluorinated tertiary alcs.: crystal structure determination of the absolute configuration of

C6F5(CF3)2COSO2C6H4CH3)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon; Houben-Weyl, Methoden der Organischen Chemie 1955, P663
- (2) Campana, C; Inorg Chem 1980, V20, P4039
- (3) Gassman, P; J Org Chem 1987, V52, P2481 CAPLUS
- (4) Kanagasabapathy, V; J Org Chem 1985, V50, P503 CAPLUS
- (5) Krumm, B; Inorg Chem 1997, V36, P366 CAPLUS
- (6) Sheldrick, G; SHELXS-90 incorporated in SHELXTL-Plus Software V 5.03 1995
- (7) Siemens Analytical Instruments Division; SAINT V 4.035 Software for the CCD Detector System 1995
- (8) Siemens Analytical Instruments Division; SHELXTL-Plus V 5.03 Software 1995
- (9) Siemens Analytical Instruments Division; SMART V 4.043 Software for the CCD Detector System 1995
- (10) Tamborski, C; J Org Chem 1966, V31, P4229 CAPLUS

L12 ANSWER 7 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1996:560559 CAPLUS

DN 125:221188

ED Entered STN: 20 Sep 1996

TI Process for the hydrolysis of fluorinated sulfonyl fluorides

IN Hommeltoft, Sven Ivar; Ekelund, Ole

PA Haldor Topsoe A/s, Den.

SO Eur. Pat. Appl., 4 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C07C309-06

ICS C07C303-32

CC 23-12 (Aliphatic Compounds)

FAN.CNT 3

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

STN search for 10765,797

PI	EP 726249	A1	19960814	EP 1996-100967	19960124
	EP 726249	B1	20000517		
	R: BE, DE, FR, GB, IT, NL				
	DK 9500145	A	19960809	DK 1995-145	19950208
	DK 173229	B1	20000417		
	US 5672741	A	19970930	US 1996-593143	19960201
	JP 08245546	A2	19960924	JP 1996-21217	19960207
	JP 3612131	B2	20050119		
	RU 2125555	C1	19990127	RU 1996-102373	19960208
PRAI	DK 1995-145	A	19950208		
	DK 1995-167	A	19950214		
	DK 1995-168	A	19950214		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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EP 726249	ICM	C07C309-06
	ICS	C07C303-32
EP 726249	ECLA	C07C303/32

OS CASREACT 125:221188

AB Base hydrolysis of a fluorinated sulfonyl fluorides with at least one mole equivalent of H₂O in a basic solvent such as a tertiary amine afforded salts of corresponding fluorinated sulfonic acids with the amine. Thus, hydrolysis of CF₃(CF₂)₃SO₂F in Et₃N/H₂O afforded CF₃(CF₂)₃SO₂H.NET₃.

ST hydrolysis fluorinated sulfonyl fluoride amine solvent; sulfonic acid fluorinated prepn amine salt

IT Perfluoro compounds

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(process for the hydrolysis of fluorinated sulfonyl fluorides)

IT 29585-72-6P 32001-55-1P 60435-94-1P 65756-37-8P

RL: BYP (Byproduct); PREP (Preparation)

(process for the hydrolysis of fluorinated sulfonyl fluorides)

IT 646-58-2P 135275-26-2P 181046-59-3P 181070-96-2P

181070-97-3P 181070-98-4P 181070-99-5P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(process for the hydrolysis of fluorinated sulfonyl fluorides)

IT 75-50-3, Trimethylamine, reactions 102-82-9, Tributylamine 110-86-1, Pyridine, reactions 121-44-8, Triethylamine, reactions 307-35-7 335-05-7 354-87-0 423-40-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(process for the hydrolysis of fluorinated sulfonyl fluorides)

L12 ANSWER 8 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1989:499369 CAPLUS

DN 111:99369

ED Entered STN: 16 Sep 1989

TI Manufacture of perfluoroalkanoic acids or sulfonic acid from the acid fluorides

IN Aramaki, Minoru; Sakaguchi, Hiroaki; Nakamura, Tamio

PA Central Glass Co., Ltd., Japan

SO Ger. Offen., 11 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM C07C143-08

ICS C07C143-16; C07C053-15; C07C057-52; C25B003-08

CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)

Section cross-reference(s): 23

FAN.CNT 1

STN search for 10765,797

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3829409	A1	19890309	DE 1988-3829409	19880830
	DE 3829409	C2	19940519		
	JP 01061452	A2	19890308	JP 1987-215195	19870831
	JP 05000382	B4	19930105		
	JP 01061443	A2	19890308	JP 1987-215197	19870831
	JP 07100676	B4	19951101		
	JP 01085946	A2	19890330	JP 1987-242602	19870929
	JP 06078270	B4	19941005		
	US 4927962	A	19900522	US 1988-237072	19880829
PRAI	JP 1987-215195	A	19870831		
	JP 1987-215197	A	19870831		
	JP 1987-242602	A	19870929		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	DE 3829409	ICM	C07C143-08
		ICS	C07C143-16; C07C053-15; C07C057-52; C25B003-08
	JP 01061443	ECLA	C07C051/02; C07C051/04; C07C053/15; C07C057/52
OS	CASREACT 111:99369; MARPAT 111:99369		
AB	Perfluoroalkanoic and sulfonic acids R(ZH)m (I; R = saturated or unsatd. C1-10 perfluoroalkyl residue; Z = CO ₂ , SO ₃ ; m = 1, 2), valuable as industrial intermediates are prepared by the reaction of the corresponding acid fluorides with H ₂ O and KOH to form the K salts of the acids which precipitate and are separated by filtration, then acidified to I. Addition of metal hydroxides (excluding KOH and alkaline earth metal hydroxides) to the mother liquor causes precipitation of the metal fluorides which are separated from the liquor, KOH added to the liquor, and the liquor recycled to the acid fluoride hydrolysis step. This process does not produce HF, which can destroy glass or metal materials, has reduced processing costs, and requires very little apparatus investment. In this manner, CF ₃ (CF ₂) ₆ COF was converted to CF ₃ (CF ₂) ₆ CO ₂ K and neutralized with H ₂ SO ₄ to CF ₃ (CF ₂) ₆ CO ₂ H. SiO ₂ was added to the mother liquor, converted to a SiF ₄ precipitate, filtered and KOH added to the liquor which was recycled to the hydrolysis step.		
ST	perfluorocarboxylic acid manuf; perfluorosulfonic acid manuf; hydrolysis potassium perfluoroalkanoate; perfluorosulfonate potassium hydrolysis		
IT	Fluorides, preparation RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and removal of, from acid fluoride conversion mother liquors)		
IT	Hydroxides RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with mother liquors, metal fluorides from)		
IT	Hydrolysis (acid, of potassium C1-10 perfluoroalkanoates and perfluorosulfonates with sulfuric acid)		
IT	Perfluoro compounds RL: RCT (Reactant); RACT (Reactant or reagent) (acid fluorides, potassium salt formation and hydrolysis of, to perfluoroalkanoic and perfluorosulfonic acids)		
IT	Perfluoro compounds RL: PROC (Process) (carboxylic acids, manufacture of, from acid fluorides by potassium salt formation and acidification)		
IT	Carboxylic acids, preparation Sulfonic acids, preparation RL: PREP (Preparation)		

STN search for 10765,797

(perfluoro, manufacture of, from acid fluorides by potassium salt formation and acidification)

IT Acid fluorides
RL: RCT (Reactant); RACT (Reactant or reagent)
(perfluoro, potassium salt formation and hydrolysis of, to perfluoroalkanoic and perfluorosulfonic acids)

IT 141-75-3, Butyryl chloride 558-25-8, Methanesulfonyl fluoride
RL: RCT (Reactant); RACT (Reactant or reagent)
(electrolytic fluorination of)

IT 7664-93-9, Sulfuric acid, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrolysis by, of potassium salts of perfluoroalkyl acids)

IT 335-67-1P, Perfluorooctanoic acid 354-88-1P, Perfluoroethanesulfonic acid 422-64-0P, Perfluoropropionic acid 1493-13-6P, Trifluoromethanesulfonic acid 7681-49-4P, Sodium fluoride, preparation 7783-61-1P
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of)

IT 378-76-7P, Potassium perfluoropropionate 2395-00-8P, Potassium perfluorooctanoate 2837-92-5P, Potassium perfluoroethanesulfonate 2926-27-4P, Potassium trifluoromethanesulfonate 2966-54-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)

IT 335-42-2P 422-61-7P, Perfluoropropionyl fluoride
RL: PREP (Preparation)
(preparation and potassium salt formation of)

IT 335-05-7P, Trifluoromethanesulfonyl fluoride
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with potassium hydroxide)

IT 1310-73-2, Sodium hydroxide, reactions 7631-86-9, Silicon dioxide, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with acid fluoride neutralization mother liquors)

IT 335-66-0, Perfluorooctanoyl fluoride 354-87-0, Perfluoroethanesulfonyl fluoride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with potassium hydroxide)

L12 ANSWER 9 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1987:636041 CAPLUS
DN 107:236041
ED Entered STN: 25 Dec 1987
TI Indirect anodic oxidation of primary perfluorinated organic compounds in fluorosulfuric acid. CIDNP and mechanism
AU Germain, Alain; Brunel, Daniel; Moreau, Patrice
CS Lab. Chim. Org., Univ. Sci. Tech. Languedoc, Montpellier, 34060, Fr.
SO Bulletin de la Societe Chimique de France (1986), (6), 895-99
CODEN: BSCFAS; ISSN: 0037-8968
DT Journal
LA French
CC 23-12 (Aliphatic Compounds)
Section cross-reference(s): 72
OS CASREACT 107:236041
AB F3C(CF2)nR (n = 1-3, 5, 6; R = H, CO2H, SO3H, CH2OH) are indirectly electrooxidized to FSO3(CF2)nCF3 in FSO3H. (FSO2)2O2, partially dissociated into radicals, is the reactive intermediate. Electrooxidn. of H(CF2)nCH2OH (n = 6, 10) gives FSO3(CF2)nSO3F, precursors for

STN search for 10765,797

perfluorinated α,ω -dicarboxylic acids.
ST electrooxidn perfluoro compd CIDNP; oxidn electrochem perfluoro compd;
fluorosulfate perfluoroalkyl
IT Oxidation, electrochemical
(of fluoroalkanes, -carboxylic acids, -alcs., and -Bu sulfate)
IT 307-30-2 335-99-9 354-33-6, Pentafluoroethane 355-37-3 375-22-4
375-73-5 1765-48-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(electrochem. oxidation of, in fluorosulfonic acid)
IT 662-98-6P 1479-51-2P 67097-65-8P 75668-23-4P 85452-27-3P
111425-87-7P 111425-89-9P 111425-90-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L12 ANSWER 10 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1986:625895 CAPLUS
DN 105:225895
ED Entered STN: 26 Dec 1986
TI Syntheses and properties of (perfluoroalkyl)phenyliodonium triflates (FITS
reagents) and their analogs
AU Umemoto, Teruo; Kuriu, Yuriko; Shuyama, Hideo; Miyano, Osamu; Nakayama,
Shinichi
CS Sagami Chem. Res. Cent., Sagamihara, 229, Japan
SO Journal of Fluorine Chemistry (1986), 31(1), 37-56
CODEN: JFLCAR; ISSN: 0022-1139
DT Journal
LA English
CC 25-3 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
OS CASREACT 105:225895
AB A variety of (per- and polyfluoroalkyl)phenyl- and p-fluorophenyliodonium
triflates were prepared in good yields by oxidation of the corresponding
iodofluoroalkanes with $\text{CF}_3\text{CO}_3\text{H}$ followed by treatment with C_6H_6 or PhF and
triflic acid. F was used as a substitute for the peracid. The use of
fluorosulfonic, sulfuric, and methanesulfonic acids instead of triflic
acid gave the fluoroalkylaryliodonium fluorosulfonates, sulfates, and
methanesulfonate, resp. Similarly, perfluoroalkylene- α,ω -
bis[aryliodonium triflates] were prepared from α,ω -
diiodoperfluoroalkanes. The treatment of (perfluoroalkyl)-p-tolyliodonium
chlorides with RSO_3Ag ($\text{R} = \text{Ph}, \text{Me}, \text{CF}_3$) and Ag_2SO_4 gave the iodonium
benzenesulfonate, methanesulfonate, and triflate, and bisiodonium sulfate.
Thermolysis of (perfluorooctyl)phenyliodonium triflate at about
150° gave perfluorooctyl triflate, PhI , and
(perfluorooctyl)iodobenzene in 73, 63, and 25% yields, resp.
ST fluoroalkylphenyliodonium triflate; iodonium perfluoroalkylphenyl
triflate; alkylodonium phenyl triflate; oxidn iodofluoroalkane arylation;
aryliodonium fluoroalkylene; silver sulfonate tolyliodonium; thermolysis
perfluorooctylphenyliodonium triflate
IT Oxidation
(of iodofluoroalkanes with trichloroperacetic acid or fluorine)
IT 591-50-4P 105436-11-1P 105436-12-2P 105436-14-4P 105458-69-3P
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in thermolysis of (perfluorooctyl)phenyliodonium
triflate)
IT 677-69-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of, with fluorine)
IT 335-58-0 335-70-6 354-64-3 355-43-1 421-70-5 422-91-3 423-39-2
423-62-1 507-63-1 754-34-7 79162-63-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of, with trifluoroperacetic acid)

STN search for 10765,797

IT 34060-68-9P 77758-70-4P 77758-71-5P 77758-72-6P 77758-73-7P
77758-74-8P 90934-12-6P 95258-41-6P 99937-29-8P 105436-10-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and reactions of)

IT 77758-89-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and thermolysis of)

IT 77758-76-0P 77758-79-3P 77758-80-6P 77758-81-7P
77758-82-8P 77758-84-0P 77758-85-1P 77758-87-3P
77758-91-9P 77758-93-1P 81664-96-2P 81807-32-1P 81807-33-2P
81807-34-3P 81807-35-4P 81807-36-5P 82959-18-0P 83609-27-2P
83609-29-4P 83609-31-8P 83609-32-9P 83609-33-0P 85474-37-9P
88628-80-2P 88628-83-5P 92917-05-0P 99937-30-1P 99937-31-2P
99937-32-3P 99937-33-4P 99937-34-5P 99937-35-6P 99937-36-7P
99937-37-8P 99937-38-9P 105436-08-6P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 34061-07-9 34061-07-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with Ag sulfonates)

IT 2386-52-9 2923-28-6 39938-06-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with iodonium chloride derivative)

IT 92917-04-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactions of, with silver sulfonates and sulfate)

IT 462-06-6 1493-13-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(use of, in preparation of aryl(polyfluoroalkyl)iodonium triflates)

IT 71-43-2P, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(use of, in preparation of aryl(polyfluoroalkyl)iodonium triflates)

L12 ANSWER 11 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1985:579962 CAPLUS

DN 103:179962

ED Entered STN: 30 Nov 1985

TI Fast atom bombardment and tandem mass spectrometry for characterizing
fluoroalkanesulfonates

AU Lyon, Philip A.; Tomer, Kenneth B.; Gross, M. L.

CS Cent. Res. Lab., 3M, St. Paul, MN, 55144, USA

SO Analytical Chemistry (1985), 57(14), 2984-9

CODEN: ANCHAM; ISSN: 0003-2700

DT Journal

LA English

CC 46-1 (Surface Active Agents and Detergents)

Section cross-reference(s): 80

AB A series of perfluoroalkanesulfonates were examined by fast atom bombardment
(FAB) ionization combined with tandem mass spectrometry (MS/MS). Both
pos. and neg. ion FAB spectra yield information for determining mol. weight and
identifying counterions. Abundant parent ions are desorbed and undergo
minimal fragmentation. Structural information is obtained from the
collision activated dissociation (CAD) spectra of selected parent ions.
Comparisons of collisionally activated decompns. are made with hydrocarbon
analogs. The fluoroalkanesulfonates undergo at least 2 remote charge site
fragmentations. The more facile is losses of C_nF_{2n+1} followed by losses
of a perfluoroalkene. A 2nd, less abundant series of fragments is formed
by losses of the elements of C_nF_{2n+2} , a process that may be analogous to

STN search for 10765,797

the parallel eliminations of the elements of C_nH_{2n+2} from carboxylates and alkyl sulfates. Perfluoroalkanesulfonates containing a single H atom have also been determined by using FAB MS/MS and their fragmentation pathways elucidated. The combination of FAB and MS/MS should be useful for anal. of mixts. of fluorinated surfactants.

ST perfluoroalkanesulfonate mass spectrometry; sulfonate perfluoroalkane mass spectrometry; surfactant mass spectrometry

IT Surfactants

(perfluoroalkanesulfonate, fast-atom-bombardment and tandem mass spectrometry of)

IT Mass spectroscopy

(fast-atom-bombardment, of perfluoroalkanesulfonates)

IT Mass spectroscopy

(tandem, of perfluoroalkanesulfonates)

IT 377-30-0 377-56-0 2794-60-7 2795-39-3 2806-16-8 2837-92-5

3871-99-6 3872-25-1 3916-24-3 29420-49-3 85187-17-3

RL: PRP (Properties)

(fast-atom-bombardment and tandem mass spectrometry of)

L12 ANSWER 12 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1984:5788 CAPLUS

DN 100:5788

ED Entered STN: 12 May 1984

TI Reaction of iodine tris(fluorosulfate) and iodine fluorosulfate with haloalkanes

AU Fokin, A. V.; Studnev, Yu. N.; Rapkin, A. I.; Tatarinov, A. S.

CS Inst. Elementoorg. Soedin., Moscow, USSR

SO Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1983), (8), 1876-8

CODEN: IASKA6; ISSN: 0002-3353

DT Journal

LA Russian

CC 23-12 (Aliphatic Compounds)

AB Adding iodine to ClO_3SF at $\leq 40^\circ$ gave .apprx.99% $I(O_3SF)_3$

(I). Substitution reaction of IO_3SF and I with RI (R = Me, n- C_3F_7) and $EtCl$ gave 40.4-55.7% RO_3SF (R = Me, n- C_3F_7 , Et). I_3O_3SF added to C_3F_4 in CCl_2CF_2Cl to give 89% iodine and 75.3% $ICF_2CF_2O_3SF$.

ST iodine triosfluorosulfate substitution haloalkane; alkyl halide substitution iodine fluorosulfate

IT Substitution reaction

(of alkyl halides with iodine fluorosulfate and tris(fluorosulfate))

IT Alkyl halides

RL: RCT (Reactant); RACT (Reactant or reagent)

(substitution reaction of, with iodine fluorosulfate and tris(fluorosulfate))

IT 116-14-3, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(addition reaction of, with triiodine fluorosulfate)

IT 13537-36-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and addition reaction of, with tetrafluoroethylene)

IT 13537-34-3P 13709-37-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and substitution reaction of, with alkyl halides)

IT 371-69-7P 421-20-5P 662-98-6P 77570-00-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

IT 7553-56-2, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

STN search for 10765,797

(reaction of, with chlorine fluorosulfate, iodine tris(fluorosulfate) by)

IT 13997-90-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with iodine, iodine tris(fluorosulfate) by)

IT 74-88-4, reactions 75-00-3 754-34-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(substitution reaction of, with iodine fluorosulfate and tris(fluorosulfate))

L12 ANSWER 13 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1983:34247 CAPLUS

DN 98:34247

ED Entered STN: 12 May 1984

TI Fluorocarbonyl compounds.

PA Sagami Chemical Research Center, Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C07C045-30; C07C047-00; C07C049-00

CC 23-15 (Aliphatic Compounds)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57118530	A2	19820723	JP 1980-183958	19801226
PRAI	JP 1980-183958		19801226		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 57118530	IC	C07C045-30IC C07C047-00IC C07C049-00
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AB RCH₂CH₂COR1[I, R, R1 = F3C(CF2)5, H; F3C(CF2)7, H; F3C(CF2)12, H; F3C(CF2)7, Me] were prepared by reaction of RPhI+ (MeSO₃)- (II) with H₂C:CHCHR1OH (III). Thus, 1 g II [R = F3C(CF2)7] was added to a mixture of 0.18 mL III (R1 = H) and 0.115 mL pyridine in MeCN at room temperature to give, after 1 h, 70% I [R = F3C(CF2)7, R1 = H].

ST carbonyl compd fluoro; fluorocarbonyl compd; allylic alc reaction fluoroalkylaryliodonium compd

IT Carbonyl compounds, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)

(fluoro, preparation of, from perfluoroalkylaryliodonium compound and allylic alcs.)

IT 77758-91-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with allylic alc., carbonyl compds. from)

IT 34598-33-9P 42028-44-4P 77758-82-8P 77758-85-1P

77758-89-5P 77758-93-1P 81807-32-1P 81807-33-2P 81807-35-4P

82486-22-4P 83957-57-7P 83957-58-8P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

IT 107-18-6, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with perfluoroalkylaryliodonium methanesulfonate, carbonyl compound from)

L12 ANSWER 14 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1982:615535 CAPLUS

DN 97:215535

STN search for 10765,797

ED Entered STN: 12 May 1984
TI Perfluoroalkylthio compounds
PA Sagami Chemical Research Center, Japan
SO Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

IC C07C149-18; C07C149-44

CC 23-9 (Aliphatic Compounds)

Section cross-reference(s): 46

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57108064	A2	19820705	JP 1980-183954	19801226
	JP 62022984	B4	19870520		
PRAI	JP 1980-183954		19801226		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 57108064	IC	C07C149-18IC	C07C149-44
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AB RSCH2CHR1X(CH2CH2S)nH(R = perfluoroalkyl; R1 = H, CH2OH; X = S, O; n = 0 or 1) were prepared Thus, stirring bis(trifluoroacetoxy)iodo-n-heptadecafluorooctane with CF3CO2H and CF3SO3H in C6H6 with ice-cooling gave 79% n-heptadecafluorooctylphenyliodonium trifluoromethanesulfonate, which was stirred with HSCH2CH2OH and 2,6-di-tert-butyl-4-methylpyridine in CH2Cl2 to give 77% 2-n-heptadecafluorooctylthioethanol (I). Reaction of I with ClSO3H and pyridine gave I sulfuric acid ester pyridinium salt, useful as a surfactant.

ST fluoroalkylthioethanol; ethanol fluoroalkylthio; surfactant
fluoroalkylthioethanol ester pyridinium salt

IT Surfactants
(parafluoroalkylthioethanol ester pyridinium salts)

IT 77758-82-8P 77758-83-9P 77758-89-5P 77758-91-9P
77758-93-1P 81807-35-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with mercaptoethanol)

IT 32857-33-3P 77758-85-1P 80783-62-6P 81056-99-7P 81057-00-3P
81057-01-4P 81057-02-5P 81807-32-1P 81807-33-2P 81945-26-8P
81945-27-9P 81945-28-0P 81945-29-1P 81945-30-4P 81945-31-5P
81945-32-6P 81945-33-7P 81945-34-8P 81945-35-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 83320-36-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, for surfactants)

IT 60-24-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with parafluorooctylthioiodonium salt)

IT 77758-73-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with trifluoroacetic acid and trifluoromethanesulfonic acid)

L12 ANSWER 15 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1982:581975 CAPLUS

DN 97:181975

ED Entered STN: 12 May 1984

TI Perfluoroalkylaromatic carboxylic acids and their derivatives

PA Sagami Chemical Research Center, Japan

STN search for 10765,797

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C07C059-125; C07C069-708

CC 25-17 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

Section cross-reference(s): 46

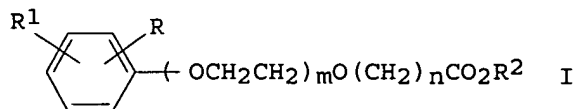
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57075946	A2	19820512	JP 1980-150219	19801028
PRAI	JP 1980-150219		19801028		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 57075946	IC	C07C059-125IC C07C069-708

GI



AB Perfluoroalkylarom. acids I [R = H, (OCH₂CH₂)₁₀(CH₂)_nCO₂R₂; R₁ = C₂-20 perfluoroalkyl; R₂ = H, alkyl, alkali metal; n = 1-3, 1, m = 0-25) were prepared Thus, heating 1 g Ph(n-C₁₀F₂₁)I+MeSO₃- with PhOCH₂CO₂Me and pyridine in MeCN at 60° gave 322 mg 37:29:34 mixture of o-, m- and p-n-C₁₀F₂₁C₆H₄OCH₂CO₂Me, hydrolysis of which by NaOH gave the Na salt mixture, useful as surfactants.

ST surfactant perfluoroalkylphenoxyacetate prepn; phenoxyacetate perfluoroalkyl

IT Surfactants

(perfluoroalkylphenoxyacetates)

IT 80791-01-1P 80791-02-2P 80791-03-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and hydrolysis of)

IT 77758-80-6P 77758-82-8P 77758-91-9P 81807-32-1P

81807-33-2P 81807-35-4P 83052-95-3P 83063-58-5P 83084-43-9P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

IT 83040-68-0P 83040-69-1P 83040-70-4P 83052-94-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, for surfactants)

IT 83040-67-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with Me phenoxyacetate)

IT 2065-23-8

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with phenyl(perfluorodecyl)iodonium methanesulfonate)

L12 ANSWER 16 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1982:509546 CAPLUS

DN 97:109546

ED Entered STN: 12 May 1984

STN search for 10765,797

TI Perfluoroalkylthio compounds
PA Sagami Chemical Research Center, Japan
SO Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC C07C149-34; C07C148-00
CC 23-9 (Aliphatic Compounds)
Section cross-reference(s): 46

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 56169667	A2	19811226	JP 1980-73674	19800603
	JP 62057183	B4	19871130		
PRAI	JP 1980-73674	A	19800603		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 56169667	IC	C07C149-34IC C07C148-00
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AB Twenty-eight perfluoroalkylthio compds. RSR1 [R = perfluoroalkyl; R1 = (un)substituted alkyl] were prepared by reaction of RR2I+ X- [R2 = (un)substituted Ph; X = halo, R3SO2O, R4CO2 (R3, R4 = alkyl, aryl, etc.) with HSR1 and used as surfactants and textile fiber treating agents (no data). Thus, 320 mg C2F5PhI+ MeSO3- was added to a mixture of 0.06 mL MeCH(SH)CO2H and 140 mg 2,6-di-tert-butyl-4-methylpyridine in CH2Cl2 at room temperature to give, after 20 min, 81% C2F5SCHMeCO2H.

ST thioetherification fluoroalkylphenyliodonium methanesulfonate mercaptoalkanoic acid; etherification thio; surfactant thioether

IT Surfactants
(thioethers)

IT Etherification
(thio-, of perfluoroalkylphenyliodonium methanesulfonates with mercaptoalkanoic acids)

IT	68409-04-1P	77758-95-3P	77758-96-4P	77758-97-5P	77758-98-6P
	77759-00-3P	77759-01-4P	77759-02-5P	77759-03-6P	77759-05-8P
	77786-38-0P	81056-98-6P	81056-99-7P	81057-00-3P	81057-01-4P
	81057-02-5P	81057-03-6P	81945-26-8P	81945-27-9P	81945-28-0P
	81945-29-1P	81945-30-4P	81945-31-5P	81945-32-6P	81945-33-7P
	81945-34-8P	81945-35-9P			

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT	79-42-5	77758-76-0	77758-79-3	77758-80-6	77758-81-7
	77758-82-8	77758-89-5	77758-91-9	81807-32-1	81807-33-2
	81807-34-3	81945-25-7			

RL: RCT (Reactant); RACT (Reactant or reagent)
(thioetherification of)

L12 ANSWER 17 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1982:471949 CAPLUS

DN 97:71949

ED Entered STN: 12 May 1984

TI Perfluoroalkyl-substituted alkanolic acids

PA Sagami Chemical Research Center, Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C07C147-00; C07C149-20; C07C149-40

ICA C11D001-66; D06M013-28

CC 23-16 (Aliphatic Compounds)

STN search for 10765,797

Section cross-reference(s): 46

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 56169666	A2	19811226	JP 1980-73675	19800603
	JP 02000344	B4	19900108		
PRAI	JP 1980-73675	A	19800603		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 56169666	IC ICA	C07C147-00IC C07C149-20IC C07C149-40 C11D001-66; D06M013-28

AB Fourteen title compds., RS(O)m(CR3R4)nCR1R2CO2R5 (R = perfluoroalkyl; R1, R2, R3, R4, R5 = H, alkyl, aryl; m = 0-2; n = 0-1) were prepared and used as surfactants and fiber treating agents in the textile industry (no data). Thus, 290 mg heptadecafluoro-n-octylphenyliodonium trifluoromethanesulfonate was added to a mixture of 0.03 mL HSCH2CO2H and 80 mg 2,6-di-tert-butyl-4-methylpyridine in CH2Cl2 at room temperature to give, after 20 min, 88% n-C6F17SCH2CO2H.

ST perfluoroalkylthioalkanoic acid surfactant prepn; alkanolic acid perfluoroalkylthio

IT Surfactants

(perfluoroalkylthioalkanoic acids)

IT 38222-83-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(catalyst for reaction of octylphenyliodonium salt with mercaptoacetic acid)

IT	77758-76-0P	77758-79-3P	77758-80-6P	77758-82-8P	
	77758-89-5P	77758-91-9P	77758-95-3P	77758-96-4P	77758-98-6P
	77758-99-7P	77759-00-3P	77759-01-4P	77759-02-5P	77759-03-6P
	77759-04-7P	77759-05-8P	81056-98-6P	81665-05-6P	81807-32-1P
	81807-34-3P	81889-80-7P	81889-81-8P	81889-82-9P	

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, for surfactants)

IT 77758-89-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with mercaptoacetic acid)

IT 68-11-1, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with octylphenyliodonium salt)

L12 ANSWER 18 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1982:217431 CAPLUS

DN 96:217431

ED Entered STN: 12 May 1984

TI Perfluoroalkylaryliodonium sulfonates

PA Sagami Chemical Research Center, Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C07C025-00; C07C017-00; C07C141-02; C07C143-06

CC 25-3 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57024319	A2	19820208	JP 1980-96281	19800716
	JP 03071422	B4	19911113		
PRAI	JP 1980-96281	A	19800716		

CLASS

STN search for 10765,797

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 57024319	IC	C07C025-00IC C07C017-00IC C07C141-02IC C07C143-06

AB RR1I+-O3SR2 (R = perfluoroalkyl; R1 = (un)substituted Ph; R2 = alkyl, aryl, perfluoroalkyl, OH, alkoxy, halo) were prepared by treating RI(O2CCF3)2 with R1H and R2SO3H. Thus, ICF2CF2CF3 was stirred with CF3CO2H, (CF3CO)2O and 30% H2O2 24 h at 0-5 to give 98% C3F7I(O2CCF3)2, which was treated with C6H6, CF3CO2H and FSO3H 2 h with ice-cooling and 1 h at room temperature to give Ph(C3F7)I+-O3SF.

ST perfluoroalkylphenyliodonium sulfonate; iodonium sulfonate
perfluoroalkylphenyl; oxidative fluoroacetoxylation iodoperfluoroalkane

IT Acetoxylation
(trifluoro-, oxidative, of iodoperfluoroalkanes by hydrogen peroxide and trifluoroacetic anhydride)

IT 354-64-3 754-34-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidative trifluoroacetoxylation of)

IT 407-25-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidative trifluoroacetoxylation of iodoperfluoroalkanes by hydrogen peroxide and)

IT 34060-68-9P 77758-70-4P 77758-71-5P 77758-72-6P 77758-73-7P
77758-74-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with benzene and sulfonic acid)

IT 77758-80-6P 77758-81-7P 77758-83-9P 77758-85-1P
77758-89-5P 77758-91-9P 77758-93-1P 77758-98-6P 77759-02-5P
77759-04-7P 77759-05-8P 81807-32-1P 81807-33-2P 81807-34-3P
81807-35-4P 81807-36-5P 81807-37-6P 81807-38-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 7789-21-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with benzene and bis(trifluoroacetoxy)iodoperfluoroalkanes)

IT 71-43-2, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reduction of, with bis(trifluoroacetoxy)iodoperfluoroalkanes and fluorosulfonic acid)

L12 ANSWER 19 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1981:532234 CAPLUS
DN 95:132234
ED Entered STN: 12 May 1984
TI Synthesis and reactions of pentafluoroethanesulfinic and pentafluoroethanesulfonic acids
AU Radchenko, O. A.; Il'chenko, A. Ya.; Yagupol'skii, L. M.
CS Inst. Org. Khim., Kiev, USSR
SO Zhurnal Organicheskoi Khimii (1981), 17(3), 500-3
CODEN: ZORKAE; ISSN: 0514-7492
DT Journal
LA Russian
CC 23-12 (Aliphatic Compounds)
Section cross-reference(s): 28
OS CASREACT 95:132234
AB F3SX (X = morpholino throughout this abstract) added to C2F4 in the presence of KF and 18-crown-6 to give 77.4% CF3CF2SF2X, which was hydrolyzed to 79.7% CF3CF2SOX with H2O and then to 83.8% CF3CF2SO2H (I) with H2SO4. I

STN search for 10765,797

was oxidized with CF₃CO₂H-H₂O₂ to give 75% CF₃CF₂SO₃H (II). I and II were derivatized by known methods.

ST perfluoroethane sulfinic sulfonic acid; fluoroethanesulfinic acid prepn
oxidn; addn morpholinotrifluorosulfurane perfluoroethylene

IT Addition reaction
(of morpholinotrifluorosulfurane with perfluoroethylene, in synthesis
of pentafluoroethane sulfinic and -sulfonic acids)

IT 116-14-3, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, with morpholinotrifluorosulfurane)

IT 51010-74-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, with tetrafluoroethylene)

IT 78491-68-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and hydrolysis of)

IT 354-87-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and reaction of, with sodium azide)

IT 78491-72-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and reaction of, with tri-Ph phosphite)

IT 354-88-1P 64773-40-6P 78491-69-7P 78491-70-0P **78491-71-1P**
78491-73-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 354-88-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, chlorination, amination and oxidation of)

IT 78491-67-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, hydrolysis and reduction of)

IT 101-02-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with pentafluoroethanesulfonyl azide)

L12 ANSWER 20 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1981:208509 CAPLUS

DN 94:208509

ED Entered STN: 12 May 1984

TI Perfluoroalkyl compounds

IN Umemoto, Teruo

PA Sagami Chemical Research Center, Japan

SO Ger. Offen., 37 pp.

CODEN: GWXXBX

DT Patent

LA German

IC C07C139-00; C07C143-08; C07C143-02; C07C143-26

CC 25-3 (Noncondensed Aromatic Compounds)

Section cross-reference(s): 23

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	DE 3021226	A1	19801211	DE 1980-3021226	19800604
	DE 3021226	C2	19921015		
	JP 55162763	A2	19801218	JP 1979-69979	19790606
	JP 60058907	B4	19851223		

STN search for 10765,797

FR 2458527	A1	19810102	FR 1980-12646	19800606
FR 2458527	B1	19841221		
US 4324741	A	19820413	US 1980-156951	19800606
US 4371710	A	19830201	US 1981-303322	19810917
PRAI JP 1979-69979	A	19790606		
US 1980-156951	A1	19800606		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 3021226	IC	C07C139-00IC C07C143-08IC C07C143-02IC C07C143-26

OS CASREACT 94:208509

AB RR1I+.R2SO3- (R = C1-20 perfluoroalkyl; R1 = Ph optionally substituted by C1-4 alkyl or halo; R2 = C1-20 perfluoroalkyl, OH, C1-4 alkyl, aryl, halo) were prepared Treating (F3CCO)2O-F3CCO2H at 0° with 30% H2O2 and F3CCF2I gave 85% F3CCF2I(O2CCF3)2 which, in F3CCO2H, was successively treated with F3CSO3H and C6H6 at 0° to give 55% (F3CCF2)PhI+.MeSO3-. Adding this to a stirred mixture of HSCH2CO2H, 2,6-di-tert-butyl-4-methylpyridine, and CH2Cl at room temperature gave 90% F3CCF2SCH2CO2H.

ST perfluorophenyliodonium salt; fluoroalkylphenyliodonium per salt; iodonium perfluoroalkylphenyl salt; fluoroethylthioacetate

IT 77758-99-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and esterification of)

IT 77758-81-7P 77758-82-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with Bu mercapto acetate)

IT 34060-68-9P 77758-70-4P 77758-71-5P 77758-73-7P 77758-74-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with acids)

IT 77758-79-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with mercaptans)

IT 77758-84-0P 77758-87-3P 77758-93-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with mercaptoacetic acid)

IT 77758-89-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with mercaptoacetic acid or alkylmercaptans)

IT 77758-72-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with trifluoromethanesulfonic acid)

IT 77758-76-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reactions of)

IT 56882-27-0P 77758-78-2P 77758-80-6P 77758-83-9P 77758-85-1P

77758-90-8P 77758-91-9P 77758-94-2P 77758-95-3P 77758-96-4P

77758-97-5P 77758-98-6P 77759-00-3P 77759-01-4P 77759-02-5P

77759-03-6P 77759-04-7P 77759-05-8P 77786-38-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

STN search for 10765,797

IT 870-23-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with (heptafluorooctyl)phenyliodonium trifluoromethanesulfonate)

IT 70-49-5 100-53-8 10047-28-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with (heptafluoropropyl)phenyliodonium trifluoromethanesulfonate)

IT 2386-52-9 39938-06-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with (heptafluoropropyl)tolyliodonium chloride)

IT 79-42-5 107-96-0 112-55-0 63291-47-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with (pentafluoroethyl)phenyliodonium trifluoromethanesulfonate)

IT 1493-13-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with benzene and bis(trifluoroacetoxy)iodoperfluoroalkanes)

IT 7664-93-9, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with bis(trifluoroacetoxy)iodoperfluoroalkanes)

IT 71-43-2, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with bis(trifluoroacetoxy)iodoperfluoroalkanes and acids)

IT 407-25-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with perfluoroalkyl iodides)

IT 68-11-1, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with perfluoroalkylphenyliodonium trifluoromethanesulfonates)

IT 34061-07-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with silver salts)

IT 335-58-0 354-64-3 355-43-1 423-62-1 507-63-1 754-34-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with trifluoroacetic anhydride)

L12 ANSWER 21 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1981:191609 CAPLUS
DN 94:191609
ED Entered STN: 12 May 1984
TI Reaction of peroxydisulfonyl difluoride with alkyl iodides
AU Fokin, A. V.; Studnev, Yu. N.; Rapkin, A. I.; Potarina, T. M.; Kuznetsova, L. D.
CS USSR
SO Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1980), (11), 2641-3
CODEN: IASKA6; ISSN: 0002-3353
DT Journal
LA Russian
CC 23-12 (Aliphatic Compounds)
OS CASREACT 94:191609
AB (FSO₂)₂O₂ reacted with RI (R = Me, CF₃, n-C₃F₇) in CCl₂F₂ or ClCF₂CCl₂F at ≤50° to give the adducts RI(O₃SF)₂ (I), the stability of which increased in the stated order of R. I decomposed on warming to RO₃SF (same R) and FSO₃I, and the latter was identified by reaction with CF₂:CFR₁ (R₁ = F, CF₃) to give R₁CFICF₂O₃SF (same R₁).
ST peroxydisulfonyl difluoride reaction alkyl iodide; fluorosulfate alkyl perfluoroalkyl

STN search for 10765,797

IT Alkyl iodides
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with peroxydisulfuryl difluoride)

IT 116-14-3, reactions 116-15-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, with iodine fluorosulfate)

IT 77569-97-2P 77569-98-3P 77569-99-4P
RL: PRP (Properties); FORM (Formation, nonpreparative); PREP (Preparation)
(formation and stability of, in reaction of peroxydisulfuryl difluoride
with alkyl iodides)

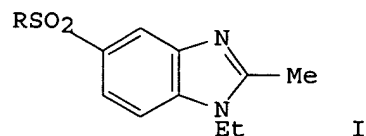
IT 13537-34-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and addition reaction of, with tetrafluoroethylene and with
hexafluoropropylene)

IT 421-20-5P 662-98-6P 926-08-9P 77570-00-4P 77570-01-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 13709-32-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with alkyl iodides)

IT 74-88-4, reactions 754-34-7 2314-97-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with peroxydisulfuryl difluoride)

L12 ANSWER 22 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1981:104882 CAPLUS
DN 94:104882
ED Entered STN: 12 May 1984
TI Imidacyanine dyes made from 2-methyl-5-perfluoroalkylsulfonylbenzimidazole
AU Troitskaya, V. I.; Popov, V. I.; Rudyk, V. I.; Kondratenko, N. V.;
Yagupol'skii, L. M.
CS Inst. Org. Khim., Kiev, USSR
SO Ukrainskii Khimicheskii Zhurnal (Russian Edition) (1980), 46(11), 1181-6
CODEN: UKZHAU; ISSN: 0041-6045
DT Journal
LA Russian
CC 40-12 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
Section cross-reference(s): 28
OS CASREACT 94:104882
GI



AB p-ClC6H4SR [R = CF2CF2CF3, (CF2)5CF3, CF(CF3)2, C(CF3)3] were oxidized to the resp. sulfones, which were nitrated, treated with EtNH2, reduced with SnCl2, and cyclized with AcCl to give benzimidazoles (I). The I were quaternized and converted by standard reactions to sym. and unsym. carbocyanines, dimethinemerocyanines with ethylrhodanine, and styryl dyes. The variation in R had little effect on the absorption λ_{max} of the cyanines in alc. solution, but did affect slightly the extent of solvatochromism.

ST fluoroalkylsulfonyl substituent imidacyanine; cyanine dye

STN search for 10765,797

fluoroalkylsulfonyl
IT Basicity
(of tetraethylbis(perfluoroalkylsulfonyl)imidacarbocyanines)
IT Dyes, cyanine
(preparation of, from methyl(perfluoroalkylsulfonyl)benzimidazolium salts)
IT 75-36-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclocondensation of, with (perfluoroalkylsulfonyl)phenylenediamines)
IT 65538-06-9 65799-83-9 68596-37-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(nitration of)
IT 76848-61-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and conversion to cyanines)
IT 76848-31-2P 76848-32-3P 76848-33-4P 76848-34-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and cyclocondensation with acetyl chloride)
IT 76848-59-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and nitration of)
IT 76848-44-7P 76848-45-8P 76848-46-9P 76848-47-0P 76848-48-1P
76848-50-5P 76848-52-7P 76848-53-8P 76848-55-0P 76848-56-1P
76848-58-3P 76863-21-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and optical absorption of)
IT 76863-22-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and oxidation of)
IT 76848-37-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and quaternization of)
IT 76848-24-3P 76848-25-4P 76848-26-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and reaction with ethylamine)
IT 76848-27-6P 76848-28-7P 76848-29-8P 76848-30-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and reduction of)
IT 76848-35-6P 76848-36-7P 76848-74-3P 76863-20-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 76848-38-9P 76848-39-0P 76848-41-4P 76848-43-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, basicity and optical absorption of)
IT 76848-62-9 76848-63-0 76848-64-1 76848-66-3 76848-68-5
76848-70-9 76848-72-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in cyanine dye preparation)
IT 75-04-7, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with chloronitrophenyl perfluoroalkyl sulfones)
IT 355-43-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with chlorothiophenol)
IT 100-10-7 3747-06-6 4589-63-3 4751-23-9
RL: RCT (Reactant); RACT (Reactant or reagent)

STN search for 10765,797

IT (reaction of, with methyl(perfluoroalkylsulfonyl)benzimidazolium salts)
106-54-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with perfluorohexyl iodide)

L12 ANSWER 23 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1981:30156 CAPLUS

DN 94:30156

ED Entered STN: 12 May 1984

TI Reaction of peroxydisulfuryl difluoride with perfluorocarboxylic acid amides

AU Fokin, A. V.; Studnev, Yu. N.; Krotovich, I. N.; Kuznetsova, L. D.;
Verenikin, O. V.; Platonov, V. G.

CS USSR

SO Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1980), (8), 1934-6
CODEN: IASKA6; ISSN: 0002-3353

DT Journal

LA Russian

CC 23-18 (Aliphatic Compounds)

OS CASREACT 94:30156

AB RCONH2 (R = CF3, n-C3F7, n-C6F13) reacted with (FSO2)2O2 at -32° in Freon-113 to give 17.4-24.9% RCON(OSO2F)2 (same R), which were fractionated to give 73.4-94.5% ROSO2F (same R). n-C6F13OSO2F with MeOH and then H2O gave n-C5F11CO2Me.

ST peroxydisulfuryl fluoride fluorosulfonation amide; fluoroaliph amide fluorosulfonation

IT Sulfonation
(fluoro-, of perfluoroaliph. amides with peroxydisulfuryl fluoride)

IT Amides, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(perfluoroaliph., fluorosulfonation of, with peroxydisulfuryl fluoride)

IT 13709-32-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(fluorosulfonation of perfluoroaliph. amides with)

IT 354-38-1 662-50-0 2358-22-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(fluorosulfonation of, with peroxydisulfuryl difluoride)

IT 67097-65-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and methanolysis of)

IT 424-18-0P 662-98-6P 926-08-9P 76086-46-9P 76086-47-0P
76086-48-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L12 ANSWER 24 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1979:540338 CAPLUS

DN 91:140338

ED Entered STN: 12 May 1984

TI Perfluoroalkanesulfonic acids

IN Von Werner, Konrad; Gisser, Alfons

PA Hoechst A.-G., Fed. Rep. Ger.

SO Ger. Offen., 14 pp.

CODEN: GWXXBX

DT Patent

LA German

IC C07C143-08; C07C139-00

CC 23-12 (Aliphatic Compounds)

FAN.CNT 1

STN search for 10765,797

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2754457	A1	19790613	DE 1977-2754457	19771207
PRAI	DE 1977-2754457	A	19771207		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	DE 2754457	IC	C07C143-08IC C07C139-00
AB	RSO3H (R = perfluoroalkyl) were prepared by treating solns. of the corresponding perfluoroalkanesulfonates with acidic cation exchangers. Thus, F3C(CF2)7SO3K in hot H2O was passed through a column of Amberlyst 15 at 90-5° to give 99.9% pure F3C(CF2)7SO3H.		
ST	perfluoroalkanesulfonic acid; perfluorooctanesulfonic acid; fluorooctanesulfonic acid per; octanesulfonic acid perfluoro; sulfonic acid perfluorooctane; acid ion exchange treatment perfluoroalkanesulfonate		
IT	Ion exchangers (acidic, treatment of perfluoroalkane sulfonates, perfluoroalkanesulfonic acids by)		
IT	Sulfonic acids, preparation (perfluoro-, preparation of, by treating perfluoroalkane sulfonates with acidic ion exchangers)		
IT	1763-23-1P RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of, by treating potassium perfluorooctanesulfonate with acidic ion exchangers)		
IT	335-77-3P 354-88-1P 355-46-4P 1493-13-6P 71500-44-2P RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of, by treatment of potassium salt with Amberlyst 15)		
IT	67-56-1, uses and miscellaneous RL: USES (Uses) (solvent, for treating potassium perfluorooctanesulfonate with Amberlyst 15)		
IT	7732-18-5, uses and miscellaneous RL: USES (Uses) (solvent, for treatment of alkali perfluoroalkanesulfonates with acidic ion exchangers)		
IT	9037-24-5 RL: RCT (Reactant); RACT (Reactant or reagent) (treatment of alkali perfluoroalkanesulfonates, perfluoroalkanesulfonic acids by)		
IT	69494-64-0 RL: RCT (Reactant); RACT (Reactant or reagent) (treatment of potassium perfluorooctanesulfonate, perfluorooctanesulfonic acid by)		
IT	2837-92-5 RL: PROC (Process) (treatment of, with Amberlyst 15, pentafluoroethanesulfonic acid by)		
IT	4021-47-0 RL: PROC (Process) (treatment of, with Amberlyst 15, perfluorooctanesulfonic acid by)		
IT	2806-16-8 40365-28-4 RL: PROC (Process) (treatment of, with Amberlyst 15, perfluorosulfonic acid by)		
IT	3871-99-6 RL: PROC (Process) (treatment of, with Amberlyst 15, tridecafluorohexanesulfonic acid by)		
IT	2926-27-4 RL: PROC (Process) (treatment of, with Amberlyst 15, trifluoromethanesulfonic acid by)		
IT	2795-39-3		

STN search for 10765,797

RL: PROC (Process)
(treatment of, with acidic ion exchangers, perfluorooctanesulfonic acid by)

IT 71551-54-7
RL: PROC (Process)
(treatment of, with potassium perfluorooctanesulfonate, perfluorooctanesulfonic acid by)

L12 ANSWER 25 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1974:449349 CAPLUS
DN 81:49349
ED Entered STN: 12 May 1984
TI Aromatic polyfluoro compounds. LV. Preparation and reactions of polyfluoro(alkylbenzenes)
AU Coe, Paul L.; Whittingham, Alan
CS Chem. Dep., Univ. Birm., Birmingham, UK
SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1974), (8), 917-19
CODEN: JCPRB4; ISSN: 0300-922X
DT Journal
LA English
CC 25-3 (Noncondensed Aromatic Compounds)
Section cross-reference(s): 46
AB C6F5MgBr with R(CF2)3CHO [R = F, CF3(CF2)3, CHF2] gave R(CF2)3CH(OH)C6H5 which by oxidation and treatment of the resulting ketones with SF4 gave R(CF2)4C6F5. Nucleophilic substitution reactions of the polyfluoro(alkylbenzenes) and CF3-(CF2)2C6F5 are described. 4-CF3(CF2)2C6F4OH, 4-CF3(CF2)3-C6F4SO3K, and 4-CF3(CF2)7C6F4SO3K are detergents.
ST fluoroalkylbenzene; nucleophilic substitution fluoroalkylbenzene; detergent fluoroalkylbenzene sulfonate
IT Hydrocarbons, preparation
RL: PREP (Preparation)
(fluoro)
IT Substitution reaction
(nucleophilic, of polyfluoro(alkylbenzenes))
IT Detergents
(potassium perfluoroalkylbenzenesulfonates and tetrafluoro(heptafluoropropyl)phenol)
IT 335-60-4 375-02-0 2648-47-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(Grignard reaction of, with bromopentafluorobenzene)
IT 344-04-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(Grignard reaction of, with fluoroalkanes)
IT 54326-26-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(nucleophilic substitution reactions of)
IT 19108-36-2P 19108-37-3P 19108-38-4P 19108-39-5P 19108-40-8P
19108-41-9P 19184-46-4P 54245-60-2P 54245-61-3P
54245-62-4P 54245-63-5P 54245-64-6P 54245-65-7P 54245-66-8P
54245-67-9P 54245-68-0P 54387-09-6P 54387-10-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L12 ANSWER 26 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1973:443248 CAPLUS
DN 79:43248
ED Entered STN: 12 May 1984
TI Fire-resistant polycarbonates

STN search for 10765,797

IN Nouvertne, Werner
PA Bayer A.-G.
SO Ger. Offen., 10 pp. Addn. to Ger. Offen. 1,930,257 (CA 74;54567m).
CODEN: GWXXBX
DT Patent
LA German
IC C08G
CC 36-6 (Plastics Manufacture and Processing)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2253072	A1	19730510	DE 1972-2253072	19721028
	US 3775367	A	19731127	US 1971-195456	19711103
	AT 325310	B	19751010	AT 1972-9259	19721031
	DK 133385	B	19760510	DK 1972-5440	19721102
	SE 403488	C	19781130	SE 1972-14237	19721102
	BE 790919	A4	19730503	BE 1972-123781	19721103
	NL 7214927	A	19730507	NL 1972-14927	19721103
	FR 2158533	A2	19730615	FR 1972-39067	19721103
	GB 1358115	A	19740626	GB 1972-50815	19721103
	CH 551464	A	19740715	CH 1972-16049	19721103
PRAI	US 1971-195456	A	19711103		
	DE 1969-1930257	A	19690613		
	US 1970-44869	A2	19700609		
	BE 1970-751924	A	19700612		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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DE 2253072	IC	C08G
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AB Fire-resistant polycarbonates based on bisphenol derivs. were prepared without rendering turbid by addition of 0.01-0.1% potassium trifluoromethanesulfonate (I) [2926-27-4] or potassium perfluoroethanesulfonate [2837-92-5]. Thus, COCl₂ was passed into bisphenol A, 4-Me₃CC₆H₄OH, 45% NaOH, H₂O, and CH₂Cl₂ at 25.deg. to give bisphenol A-phosgene copolymer (II) [25971-63-5] of relative viscosity 1.28 (0.5 g II in 100 ml CH₂Cl₂, 25.deg.). II samples (120 .tim. 10 .tim. 4mm) containing 0.1% I burnt .leq. 30 sec in OS 1,930,257 test.

ST fire resistance polycarbonate; fluoroalkanesulfonate fire retardant polycarbonate; sulfonate fluoroalkane fire retardant

IT Fireproofing
(of polycarbonates with potassium perfluoroalkanesulfonates)

IT 2795-39-3 2837-92-5 2926-27-4
RL: USES (Uses)
(fireproofing of polycarbonates with)

IT 463-79-6, Carbonic acid 32844-27-2
RL: PROC (Process)
(fireproofing of, with potassium perfluoroalkanesulfonates)

IT 27290-30-8
RL: PROC (Process)
(fireproofing of, with potassium perfluoroethanesulfonate)

IT 24936-68-3 25971-63-5
RL: PROC (Process)
(fireproofing of, with potassium perfluoromethanesulfonate)

L12 ANSWER 27 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1972:564122 CAPLUS
DN 77:164122
ED Entered STN: 12 May 1984
TI Synthesis and pyrolysis of fluorosulfates
AU Krespan, Carl G.

STN search for 10765,797

CS Cent. Res. Dep., E. I. du Pont de Nemours and Co., Wilmington, DE, USA
SO Journal of Fluorine Chemistry (1973), Volume Date 1972-1973, 2(2), 173-80
CODEN: JFLCAR; ISSN: 0022-1139
DT Journal
LA English
CC 23-18 (Aliphatic Compounds)
AB Peroxydisulfuryl difluoride is found to substitute a fluorosulfato group for isolated H in a fluorinated chain. The reaction is initiated by FSO₂O• radicals and proceeds under mild conditions. CF₃CF₂CF₂O₃SF and FSO₃CF₂-(CF₂)₅CN are prepared and CF₃CF:CF₂-CH₂:CF₂ copolymer is crosslinked by this method. In the absence of H, the reagent adds to olefins, e.g., 1,2-dichlorohexafluorocyclopentene and hexafluoropropylene to give bis(fluorosulfate) esters. Pyrolyses of fluorosulfates are described.
ST peroxydisulfuryl fluoride substitution addn; fluorosulfate ester prepn
pyrolysis; propanol perfluoro fluorosulfate
IT 376-33-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(dehydration of)
IT 38807-02-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(oligomeric)
IT 13709-32-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and fluorosulfation with)
IT 662-98-6P 2599-81-7P 38807-01-1P 38877-81-5P 38877-82-6P
38877-84-8P 38877-85-9P 38877-86-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 116-15-4 706-79-6 2252-84-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with peroxydisulfuryl fluoride)
L12 ANSWER 28 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1970:99942 CAPLUS
DN 72:99942
ED Entered STN: 12 May 1984
TI Reactions of perfluoroalkanesulfonic acids. II. Chemistry of
perfluoroalkanesulfonic acids
AU Schmeisser, Martin; Sartori, Peter; Lippsmeier, Bernd
CS Inst. Anorg. Chem. Elektrochem., Tech. Hochsch. Aachen, Aachen, Fed. Rep.
Ger.
SO Chemische Berichte (1970), 103(3), 868-79
CODEN: CHBEAM; ISSN: 0009-2940
DT Journal
LA German
CC 23 (Aliphatic Compounds)
AB CF₃SO₃H was prepared in 90% yield from CS₂ and HgF₂ via Hg(SCF₃)₂, which was oxidized by H₂O₂. Reaction of RSO₃H (where R = CF₃ or C₂F₅) with elements of Groups 4a and 4b was studied. Zr(OSO₂R)₄ and Th(OSO₂R)₄ were easily prepared in quant. yield. From TiCl₄ only Ti(OSO₂R)₂Cl₂ and Ti(OSO₂R)₃Cl were obtained. Attempts to prepare the tetrasulfonates of Si, Sn, and Pb failed, but compds. of the type R₁nM(OSO₂R)_{4-n} (where R = CF₃ or C₂F₅; R₁ = Me or Ph; M = Si, Sn, or Pb; and n = 1, 2, or 3) were produced.
ST perfluoroalkane sulfonic acids; sulfonic acids perfluoroalkane;
fluoroalkane sulfonic acids; titanium fluoroalkane sulfonates; thorium
fluoroalkane sulfonates; zirconium fluoroalkane sulfonates; silicium
fluoroalkane sulfonates; tin fluoroalkane sulfonates; lead fluoroalkane
sulfonates
IT Sulfonic acids, preparation

STN search for 10765,797

RL: PREP (Preparation)
(perfluoroalkane)

IT 354-88-1DP, Ethanesulfonic acid, pentafluoro-, metal complexes
1493-13-6DP, Methanesulfonic acid, trifluoro-, metal complexes
2794-60-7P 2837-92-5P 14848-28-3P 15001-53-3P 21259-75-6P
27104-41-2P 27532-12-3P 27532-13-4P 27607-68-7P 27607-70-1P
27607-71-2P 27607-72-3P 27607-73-4P 27607-74-5P 27607-75-6P
27607-76-7P 27607-77-8P 27607-78-9P 27607-79-0P 27607-80-3P
27607-81-4P 27607-82-5P 27607-83-6P 27607-84-7P
27607-85-8P 27607-86-9P 27607-87-0P 27607-88-1P 27607-89-2P
27607-90-5P 27607-91-6P 27607-92-7P 27642-26-8P
27698-71-1P 27714-26-7P 28021-32-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L12 ANSWER 29 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1969:429999 CAPLUS
DN 71:29999
ED Entered STN: 12 May 1984
TI Reactions of perfluoroalkanesulfonic acids. I. Trihalomethyl ester of
perfluoroalkanesulfonic acids
AU Schmeisser, Martin; Sartori, Peter; Lippsmeier, Bernd
CS Techn. Hochsch., Aachen, Fed. Rep. Ger.
SO Chemische Berichte (1969), 102(6), 2150-2
CODEN: CHBEAM; ISSN: 0009-2940
DT Journal
LA German
CC 23 (Aliphatic Compounds)
OS CASREACT 71:29999
AB (RSO₂O)2Hg were treated with CXCl₃ to give RSO₂OCCl₃ (where R = CF₃ or
C₂F₅). Best yields were obtained when X = Br. Although RSO₂OCCl₃ were
obtained when X = I, the intermediate (RSO₂O)2CCl₂ underwent partial
decomposition to (RSO₂)₂O and COCl₂.
ST fluoro alkane sulfonates; alkane sulfonates fluoro; sulfonates alkane
fluoro; perfluoro alkane sulfonates; alkane sulfonates perfluoro;
sulfonates alkane perfluoro
IT Sulfonic acids, preparation
RL: PREP (Preparation)
(perfluoroalkane)
IT 24401-22-7P 24401-23-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L12 ANSWER 30 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1967:463788 CAPLUS
DN 67:63788
ED Entered STN: 12 May 1984
TI Fluoroalkyl perfluoroalkanesulfonates
IN Hansen, Robert Lloyd
PA Minnesota Mining and Manufacturing Co.
SO Fr., 10 pp.
CODEN: FRXXAK
DT Patent
LA French
IC C07C
CC 23 (Aliphatic Compounds)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 1470669	----	19670224	FR	-----

STN search for 10765,797

DE 1275052	DE
DE 1668429	DE
GB 1143481	GB
US 3419595	19680000 US

PRAI US 19650305

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

FR 1470669 IC C07C

GI For diagram(s), see printed CA Issue.

AB Fluoroalkyl perfluoroalkanesulfonates for use in alkylation reactions are prepared by treating stoichiometric amts. of perfluoroalkanesulfonyl halides with strongly fluorinated carbinols in the presence of a difficult to quaternize tertiary amine as an acid acceptor. Thus, 84.5 parts CF₃SO₂Cl (m. -26°) was condensed at 75°, 100 parts CH₂Cl₂ added, a mixture of 55.5 parts F₃CCH₂OH and 56 parts Et₃N added during 20 min. at -40 to -30°, the mixture heated to 0°, and the clarified solution washed successively with 100 parts 5% aqueous HCl, 100 parts aqueous NaOH, and twice with 50 parts water, concentrated, and fractionally distilled to give

95.5 parts CF₃SO₃CH₂CF₃, b₇₄₀ 89-91°, n_{25D} 1.3037. Similarly prepared were the following fluoroalkyl trifluoromethanesulfonates (fluoroalkyl group, b.p./mm., and n_{25D} given): CF₃(CF₂)₂CH₂, 118-20°/732, 1.3020; CF₃CF₂CH₂, 102-5°/740, 1.3012; CF₃(CF₂)₆CH₂, 74-5°/5, 1.3098; H(CF₂)₂CH₂, 122-5°/737, 1.3203; H(CF₂)₄CH₂, 69-72°/21, 1.3191; H(CF₂)₈CH₂, 117-19°/20, 1.3200; (C₈F₁₁)CH₂ (sic), 73-6°/20, 1.3253; CF₃SO₂OCH₂(CF₂)₃CH₂, 76-8°/20, 1.4252; CF₃O(CF₂)₂CH₂, 120-3°/740, 1.3070. Also prepared were: I, b₂₂ 64-6°, n_{25D} 1.3167, CF₃CH₂SO₃CH₂CF₃, b₇₄₀ 105-6°, n_{25D} 1.3028, CF₃(CF₂)₇SO₃CH₂(CF₂)₂CF₃, b₇₄₀ 225-7°, m. 59-62°, CF₃SO₃CH₂(CF₂)₅CF₂H, b₉ 75-8°, n_{25D} 1.3194, and CF₃SO₃CH₂(CF₂)₉CF₂H, b₁₀ 125-30°, m. 56-9°. The esters were used to introduce a nonfluorinated radical on a strongly fluorinated organic radical. For example, H₂NCH₂CH₂NH₂ 3, C₆H₆ 30, and CF₃SO₃CH₂(CF₂)₂CF₃ 33.2 parts was heated to reflux, 10.1 parts Et₃N added during 20 min., the mixture refluxed 1 hr., cooled, washed with water, evaporated, concentrated and distilled

to give [CF₃(CF₂)₂CH₂NHCH₂]₂, b₁₅ 97-100°, n_{25D} 1.3282. Similarly prepared were CF₃CH₂NET₂, b₇₄₀ 89-91°, n_{25D} 1.508, [C₃F₇CH₂NH(CH₂)₃]₂, b₂₀ 70-2°, n_{25D} 1.3619, H(CF₂)₆CH₂NHBu, b₈ 85-93°, II, m. 72-4°, [H(CF₂)₆CH₂N(CH₂)₂]₂, m. 60-2°, H(CF₂)₆CH₂NHPr, b₁₀ 75-80°, n_{25D} 1.3378, H(CF₂)₁₀CH₂NBu₂, b_{0.3} 105-8°, n_{25D} 1.3533, m. .apprx.25°, [H(CF₂)₈CH₂NCH₂]₂, m. 57-8°, and [H(CF₂)₆CH₂NH(CH₂)₃]₂, b₂₀ 145-50°, n_{25D} 1.3579. Other reaction products formed included CF₃CH₂SPh, b₁₅ 83-4°, n_{25D} 1.4881, a 2',2',2'-trifluoroanethole, b₁₀ 55-8°, n_{25D} 1.4376, 2-(1,1,7-trihydroperfluoroheptyl)cyclohexanone, b₂₀ 100-10°, CF₃(CF₂)₂CH₂PO(OEt)₂, b_{2.5} 72-2.5°, n_{25D} 1.3489, CF₃(CF₂)₆CH₂PO(OEt)₂, b_{0.35} 91-6°, n_{25D} 1.3486, CF₃CH₂NET₂, b₇₄₀ 89-91°, n_{25D} 1.3508, CF₃CH₂I, b₇₆₀ 60-1°, CF₃(CF₂)₂CH₂OSO₂C₆H₄Me-p, m. 28-9°, CF₃(CH₂)₆CH₂SCN, m. 63-6°, and CF₃(CF₂)₆CH₂NHNH₂.HCl, b₅ 73-5°.

ST FLUOROALKANE SULFONATES FLUOROALKYL; SULFONATES FLUOROALKANE FLUOROALKYL
IT Alkylation
(of amines, agents for, polyfluoroalkyl trifluoromethanesulfonates as)
IT Kinetics, reaction
(of iodide with 2,2,2-trifluoroethyl trifluoromethanesulfonate)
IT Kinetics of methanolysis
(of polyfluoroalkyl perfluoroalkanesulfonates)
IT Sulfonic acids, esters

STN search for 10765,797

RL: RCT (Reactant); RACT (Reactant or reagent)
(polyfluoroalkyl perfluoroalkane)
IT Amines, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(polyfluoroalkylation of)
IT 1493-13-6D, Methanesulfonic acid, trifluoro-, polyfluoroalkyl esters
RL: RCT (Reactant); RACT (Reactant or reagent)
(amine alkylation with)
IT 312-66-3P 353-83-3P 370-68-3P 2262-07-9P 6226-25-1P
6226-26-2P 6226-29-5P 6401-00-9P 6401-01-0P 6401-02-1P
17351-87-0P 17351-91-6P 17351-92-7P 17351-93-8P 17351-94-9P
17351-95-0P 17351-96-1P 17351-97-2P 17351-98-3P 17351-99-4P
17352-00-0P 17352-01-1P 17352-03-3P 17352-04-4P 17352-05-5P
17352-06-6P 17352-07-7P 17352-08-8P 17352-09-9P 17352-10-2P
17352-11-3P 17352-12-4P 17352-13-5P 17352-14-6P 17469-33-9P
18462-98-1P 20470-29-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 20461-54-5, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(with 2,2,2-trifluoroethyl trifluoromethanesulfonate, kinetics of)

L12 ANSWER 31 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1966:420395 CAPLUS

DN 65:20395

OREF 65:3748f-h,3749a-d

ED Entered STN: 22 Apr 2001

TI Halogenated alkyl chlorosulfates and fluorosulfates

IN Hauptschein, Murray; Braid, Milton

PA Pennsalt Chemicals Corp.

SO 9 pp.

DT Patent

LA Unavailable

NCL 260456000

CC 33 (Aliphatic Compounds)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3254107		19660531	US	19580516

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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US 3254107	NCL	260456000
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AB The title compds. were prepared by the reaction of ClSO₃H (I) or FSO₃H with halogenated alkyl iodides. Thus, 50 g. I and 11.8 g. C₃F₇I were sealed under dry, high purity N in a 70 ml. heavy wall Pyrex glass ampul, heated 65 hrs. at 130°, and the ampul cooled in dry ice, opened, and warmed to room temperature. The volatiles evolved during warming were passed through aqueous neutral KMnO₄ solution to remove SO₂, dried over anhydrous

CaSO₄, and condensed in a refrigerated trap to give 11% C₃F₇Cl. The liquid portion of the reaction mixture gave 10.7 g. crude product. This was washed (H₂O) and redistd. to give C₃F₇OSO₂Cl, b. 80° n_D²⁵ 1.3124. Ir data clearly distinguished the chlorosulfate from both sulfonyl chloride and chlorosulfite. An autoclave containing 40 g. C₃F₇[CF₂CF(CF₃)]₄I was sealed, evacuated, cooled to -195°, 40 g. CF₂:CF₂ admitted to the autoclave by gaseous transfer in vacuo, and the reaction mixture heated with shaking 18 hrs. at 190° (pressure dropped from 1500 to 50 psig.), to give 1 g. olefin and 8 g. C₃F₇[CF₂CF(CF₃)]₄I; 70 g. (75% conversion) white soft C₃F₇[CF₂CF(CF₃)]₄(CF₂CF₂)_nI (n = 12av.) (II), containing no substantial amount

of material in which n is <9 or >25, and m. 44-150°, was collected from the autoclave. II (14.5 g.) and 25 g. I was sealed under N, as described above and heated 17 hrs. at 150° to give 12 g. (84% conversion) C2F7[CF2(CF3)]4(CF2CF2)nOSO2Cl (n = 12av.), 7.5g. aliquot of which was distd, to give the following fractions: (a) (n = 9av.), b0.1 135-40°, 28%; (b) (n = 11av.), b0.1 180-90°, 28%; (c) (n = 13av.), b0.1 190-200°, 21%; (d) (n = 25av.), m. 245-81°, 23%. No decompn, of fraction (d) was noted at still pot temperature >400°. CF2ClCF(CF3)[CF2CF(CF3)]2av..(CF2CF2)4av.I, b0.1 62-82°, treated with I 20 hrs. at 150° gave the OSO2Cl derivative C2F5(CF2CF2)3I prepared by reaction of C2F5I with CF2:CF2 at room temperature under uv (Haszeldine, CA 49, 1533b) and treated with excess I 15 hrs. at 145° gave C2F5(CF2CF2)3OSO2Cl. Similarly prepared were: ClO2SO(CF2CF2)3OSO2Cl; ClO2SO(CF2)5OSO2Cl; ClO2SO(CF2)(CH2CF2)4OSO2Cl. C2F5CF(CF3)(CH2CF2)3I (U.S. 2,975,220, CA 55, 15345g) (26 g.) was added with stirring during 20 min. to 50 g.I. (Exothermic reaction was kept at 4-5°.) Solid cryst, iodine formed in the reaction mixture The mixture was stirred 7.5 hrs. at 0-4° and cautiously hydrolyzed by dropwise addition of 40 ml. ice-H2O. Fractionation of the organic layer combined with the aqueous layer Cl2FCCClF2 extract gave 90% crude chlorosulfate, b0.1 74-86°, representing 79% conversion; a fraction b0.1 80°, had n27D 1.352. Reaction of CF2ClCF(CF3)(CH2CF2)4.5av.I with I gave 85% yield of a mixture of CF2ClCF(CF3)(CH2CF2)3.5av CH2CO2H and its CH2C(O)F derivative (III). Anhydrous NH3 was passed through a solution of 7 g. III in

50 ml.

anhydrous Et2O during 15 min., the solution filtered, and the filtrate distd, to

give 76% amide, b0.1 156-62°, m. 49-50° (Cl2FCCClF2). Also obtained in good yield were: CF2ClCFClOSO2Cl, b100 76°, nSOD 1.392; CFC12CF2OSO2Cl, b100 76°, n25D 1.3943; CF2ClCHClOSO2Cl, b5 78-9°, n25D 1.418; CF3CHFOSO2Cl and CF2ClCHCl(CF2CHCl)4av. OSO2Cl. The sealed tube reaction of 15 g. n-C3F7I and 30 g. FSO3H gave >95% C3F7OSO2F which was purified chromatographically using a Perkin-Elmer "B" column at 30°/30 psig. He to give a liquid, b. 46°, n25D 1.29. Also prepared were: CF2ClCFClOSO2F, b. 89° n24D 1.3468; C2F5CF(CF3)(CH2CF2)OSO2F, b100 114°; C3F7[CF2CF(CF3)]2OSO2F, b. 85-9°; CF3CFClOSO2Cl, b. 90°; CF2ClCF(CF3)[CF2CF2]3OSO2F, b20 94-5°; CF3CCl2OSO2Cl, b100 77°; CF3CF(CF3)[CF2CF2]4OSO2Cl, 78.9% yield; CF3CF(CF2Cl)[CF2CF2]4OSO2Cl, 80.4% yield. The title compds. are intermediates for conversion into halogenated carboxylic acids, esters, thioesters, amides, ketones, and aldehydes through a series of unique one-step reactions.

IT 2-Octanol, 1,1,1,2,3,3,4,5,5,6,6,7,7,8,8,8-hexadecafluoro-4-

(trifluoromethyl)-, fluorosulfate, mixture with heptadecafluoro-4-

(trifluoromethyl)octane

Octane, heptadecafluoro-4-(trifluoromethyl)-, mixture with

1,2,2,3,4,4,5,5,6,6,7,7-tridecafluoro-1,3-bis(trifluoromethyl)heptyl fluorosulfate

IT 7789-21-1, Fluorosulfuric acid 7790-94-5, Chlorosulfuric acid (haloalkyl esters)

IT 649-52-5, 1-Heptanol, 1,1,3,3,5,5,6,6,7,7,7-decafluoro-5-(trifluoromethyl)-,

fluorosulfate 649-60-5, Ethanol, 1-chloro-1,2,2,2-tetrafluoro-,

chlorosulfate 662-97-5, 1-Propanol, heptafluoro-, chlorosulfate

662-98-6, 1-Propanol, heptafluoro-, fluorosulfate 681-13-0,

1-Nonanol, 1,1,3,3,5,5,7,8,8,9,9,9-dodecafluoro-7-(trifluoromethyl)-,

chlorosulfate 681-23-2, Ethanol, 1,1-dichloro-2,2,2-trifluoro-,

chlorosulfate 681-24-3, Ethanol, 1,2-dichloro-1,2,2-trifluoro-,

chlorosulfate 681-25-4, Ethanol, 1,2-dichloro-1,2,2-trifluoro-,

fluorosulfate 681-27-6, Ethanol, 2,2-dichloro-1,1,2-trifluoro-,

chlorosulfate 2821-98-9, Ethanol, 1,2-dichloro-2,2-difluoro-,

STN search for 10765,797

chlorosulfate 5851-91-2, 1-Decanol, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,10,10,10-eicosafuoro-9-(trifluoromethyl)-, chlorosulfate 5851-92-3, 1-Decanol, 9-(chlorodifluoromethyl)-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,10,10,10-eicosafuoro-, chlorosulfate 5851-93-4, 1-Octanol, 7-(chlorodifluoromethyl)-1,1,2,2,3,3,4,4,5,5,6,6,7,8,8,8-hexadecafluoro-, fluorosulfate (preparation of)

L12 ANSWER 32 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1966:75453 CAPLUS

DN 64:75453

OREF 64:14091h,14092a-d

ED Entered STN: 22 Apr 2001

TI Perhaloalkyl chlorosulfates and fluorosulfates

IN Hauptschein, Murray; Braid, Milton

PA Pennsalt Chemicals Corp.

SO 7 pp.

DT Patent

LA Unavailable

NCL 260456000

CC 33 (Aliphatic Compounds)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3238240		19660301	US	19580516

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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US 3238240	NCL	260456000
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AB A mixture of ClSO₃H (I) and 11.8 g. C₃F₇I, sealed in a tube under dry, high purity N₂, was heated 65 hrs. at 130° to give orange crystals of ICl₃, 11% n-C₃F₇Cl, identified by its ir spectrum, and 89% C₃F₇OSO₂Cl, b. 80°, n_D²⁰ 1.3124. An autoclave containing 40 g. C₃F₇CF₂CF₂(CF₃)₄I (II) was sealed, evacuated, and cooled to -195°, 40 g. CF₂:CF₂ admitted to the autoclave by gaseous transfer in vacuo, and the reaction mixture heated with shaking 18 hrs. at 190° (pressure dropped from 1500 to 50 psig.) to give 8 g. II and 70 g. (75% conversion) telomer iodide, R₄(CF₂CF₂)_n (III) [R = C₃F₇[CF₂CF₂(CF₃)], n = 12 (all n values are averages)], m. 44-150°. I (25 g.) and 14 g. III heated 17 hrs. at 150° gave 12 g. (84% conversion) R₄(CF₂CF₂)_nOSO₂Cl (IV) (n = 12) and a 7.5-g. aliquot distilled at 0.1 mm. gave 28% IV (n = 9), b. 135-40°, 28% IV (n = 11), b. 180-90°, 21% IV (n = 13), b. 190-200°, and 23% residue IV (n = 25), m. 245-81°. To 93 g. I heated to 50°, 23 g. CF₂ClCFCl (prepared by reaction of ICl with CF₂:CFCl at 30°) was added with stirring during 10 min., the mixture heated to 60°, stirred 2 hrs., cooled and hydrolyzed by pouring over ice. The H₂O insol. layer was dried (CaSO₄) and distilled to give 12 g. CF₂ClCFClOSO₂Cl, b₁₀₀ 75°, n_D²⁰ 1.392, and showed characteristic chlorosulfate ir absorption bands. The following compds. were similarly prepared (b.p. and % yield given): CFCl₂CF₂OSO₂Cl, 76° (n_D²⁰ 1.3943), --; C₃F₇OSO₂F, 46° (n_D²⁵ 1.290), 95; CF₂ClCFClOSO₂F, 89°, n_D²⁴ 1.3468, 90; CF₃CFClOSO₂Cl, 90°, --; CF₃CCl₂OSO₂Cl, 77°/100 mm., --; CF₃CF(CF₃)(CF₂CF₂)₄OSO₂Cl, --, 78.9; CF₃CF(CF₂Cl)(CF₂CF₂)₄OSO₂Cl, --, 80.4; CF₂ClCF(CF₃)(CF₂CF₂)₃OSO₂Cl, 94-5°/20 mm., 83; CF₂ClCF(CF₃)(CF₂CF₂)₃OSO₂Cl, 120°/23 mm., 78. The title compds., C₁-3, are useful insecticides, bactericides, fungicides, etc. The C₆-15 compds. are useful as surfactants, wetting agents, emulsifiers, and as additives to Cr plating baths for reduction of mist and spray. The halosulfates are useful acylating agents for cotton and regenerated cellulose fibers and fabrics without the necessity of

STN search for 10765,797

first hydrolyzing the halosulfate acid. Such treatment imparts resistance to flame, H₂O, and to oil and grease spotting.

IT Spectra, infrared
(of perhaloalkyl chlorosulfates and fluorosulfates)

IT Surface-active substances
(perhaloalkyl chlorosulfates and fluorosulfates)

IT Pesticides
(perhaloalkyl chlorosulfates and fluorosulfates as)

IT Dodecane, docosafluoro-2-iodo-4,6,8-tris(trifluoromethyl)-, telomers with C₂F₄

IT 13772-34-4, ICl₃, compound with SCl₄ (2:1)
(formation of)

IT 7789-21-1, Fluorosulfuric acid 7790-94-5, Chlorosulfuric acid
(perhaloalkyl esters)

IT 354-61-0, Ethane, 1,2-dichloro-1,1,2-trifluoro-2-iodo- 422-86-6,
Propane, 1-chloroheptafluoro- 507-63-1, Octane, heptadecafluoro-1-iodo-
647-33-6, 1-Octanol, heptadecafluoro-, chlorosulfate 649-60-5, Ethanol,
1-chloro-1,2,2,2-tetrafluoro-, chlorosulfate 661-66-5, Ethane,
1,1-dichloro-1,2,2-trifluoro-2-iodo- 662-97-5, 1-Propanol,
heptafluoro-, chlorosulfate 662-98-6, 1-Propanol, heptafluoro-,
fluorosulfate 681-23-2, Ethanol, 1,1-dichloro-2,2,2-trifluoro-,
chlorosulfate 681-24-3, Ethanol, 1,2-dichloro-1,2,2-trifluoro-,
chlorosulfate 681-25-4, Ethanol, 1,2-dichloro-1,2,2-trifluoro-,
fluorosulfate 681-27-6, Ethanol, 2,2-dichloro-1,1,2-trifluoro-,
chlorosulfate 5851-91-2, 1-Decanol, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,10
1,10,10-eicosafluoro-9-(trifluoromethyl)-, chlorosulfate 5851-92-3,
1-Decanol, 9-(chlorodifluoromethyl)-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,10,1
0,10-eicosafluoro-, chlorosulfate 5851-93-4, 1-Octanol,
7-(chlorodifluoromethyl)-1,1,2,2,3,3,4,4,5,5,6,6,7,8,8,8-hexadecafluoro-,
fluorosulfate 5891-24-7, 1-Octanol, 7-(chlorodifluoromethyl)-
1,1,2,2,3,3,4,4,5,5,6,6,7,8,8,8-hexadecafluoro-, chlorosulfate
(preparation of)

IT 7789-21-1, Fluorosulfuric acid 7790-94-5, Chlorosulfuric acid
(secondary perhaloalkyl esters)

IT 116-14-3, Ethylene, tetrafluoro- 116-15-4, Propene, hexafluoro-
(telomers)

IT 422-92-4, Propane, 1-chlorohexafluoro-2-iodo-
(telomers from)

L12 ANSWER 33 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1966:67311 CAPLUS

DN 64:67311

OREF 64:12547g-h

ED Entered STN: 22 Apr 2001

TI Carbon tetrachloride

PA Halcon International, Inc.

SO 5 pp.

DT Patent

LA Unavailable

IC C07C

CC 33 (Aliphatic Compounds)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	NL 6506177		19651123	NL	
PRAI	US		19640522		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
NL 6506177	IC	C07C

STN search for 10765,797

AB Chlorination of C2-3 hydrocarbons at elevated pressure resulted in increased yields of CCl4. For example, 92.2 kg./hr. propane reacts with 1403.5 kg./hr. Cl at 564° and 0.63 atmospheric, to give 742.5 kg./hr. CCl4 and 82.8 kg./hr. C2Cl4; product-ratio 90.5% CCl4. At 0.28 atmospheric 457 kg./hr. CCl4 and 214 kg./hr. C2Cl4 are formed; product-ratio 68.0% CCl4.

IT Hydrocarbons
(chlorination of C2-C3, to CCl4)

IT Chlorination
(of propane, CCl4 and C2Cl4 by)

IT 56-23-5, Carbon tetrachloride 127-18-4, Ethylene, tetrachloro-
(manufacture of, by propane chlorination)

IT 375-39-3, Butane, 1,1,3,3,4-pentachloro-1,2,2,4,4-pentafluoro- 422-86-6,
Propane, 1-chloroheptafluoro- 662-97-5, 1-Propanol,
heptafluoro-, chlorosulfate 1426-23-9, Hexane, 2-chlorotridecafluoro-
6188-55-2, 1-Butanol, 1,3,3,4-tetrachloro-1,2,2,4,4-pentafluoro-,
chlorosulfate
(preparation of)

L12 ANSWER 34 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1966:67310 CAPLUS

DN 64:67310

OREF 64:12547f-g

ED Entered STN: 22 Apr 2001

TI Fluorocarbon chlorides

IN Hauptschein, Murray; Braid, Milton

PA Pennsalt Chemicals Corp.

SO 2 pp.

DT Patent

LA Unavailable

NCL 260653000

CC 33 (Aliphatic Compounds)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3231626		19660125	US	19580516

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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US 3231626	NCL	260653000
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AB Perfluorocarbon iodides and perfluorochlorocarbon iodides are converted by chlorosulfonic acid (I) to the corresponding chlorides. Thus, 50 g. I and 11.8 g. 1-iodoperfluoropropane (II) was heated to 130° for 65 hrs. in a 70-ml. hard glass ampul. The ampul was opened at dry-ice temperature. Volatiles evolved during warming were passed through aqueous KMnO4 to remove SO2, dried over CaSO4, and condensed to obtain 0.9 g. n-C3F7Cl. Distillation

of the residue gave 10.7 g. n-C3F7SO2Cl. Other chlorides were prepared similarly (iodide, I, reaction temperature, time, yield of chloride, and yield of sulfonyl chloride given:) 15 g. II, 25 g., 155°, 2 hrs., 46%, 52%; 30 g. CFCl2CF2I, 70 g., 100°, 2 hrs., trace, major; 5 g. n-C4F9CFICF3, 20 g., 148°, 112 hrs., 100% (b. 83-4°, n26D 1.2866), --; 35 g. CF2ClCCl2CFClI, 49.5 g., 50-55°, 2 hrs., 12%, 59%.

IT Paraffins
(chloro perfluoro)

IT Chlorination
(of perfluoroalkyl and chloro perfluoroalkyl iodides by ClSO3H)

IT Alkyl iodides
(perfluoro and chloro perfluoro, chlorination by ClSO3H)

IT 7790-94-5, Chlorosulfuric acid

STN search for 10765,797

(perfluoroalkyl and chloro perfluoroalkyl iodide chlorination by)

IT 375-39-3, Butane, 1,1,3,3,4-pentachloro-1,2,2,4,4-pentafluoro-
662-97-5, Chlorosulfuric acid, heptafluoropropyl ester
1426-23-9, Hexane, 2-chlorotridecafluoro- 4459-16-9, Propane,
2-chlorohexafluoro-2-(trifluoromethyl)- 6188-55-2, 1-Butanol,
1,3,3,4-tetrachloro-1,2,2,4,4-pentafluoro-, chlorosulfate
(preparation of)

L12 ANSWER 35 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1966:43095 CAPLUS
DN 64:43095
OREF 64:7985a
ED Entered STN: 22 Apr 2001
TI Perfluoroalkanesulfonate esters as alkylating agents
AU Hansen, Robert L.
CS Minnesota Mining & Mfg. Co., St. Paul
SO Journal of Organic Chemistry (1965), 30(12), 4322-4
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA English
CC 32 (Physical Organic Chemistry)
AB CF₃SO₂OCH₂R (R = CF₃, CF₂CF₃, CF₂CF₂CF₃, and CF₂CF₂H) and CF₃CF₂SO₂OCH₂CF₃
were prepared. The rate of methanolysis of these compds. at 100° was
obtained and given in a table. CF₃SO₂OCF₂CF₃ was treated with NH₄Et₂ to
give CF₃CH₂NEt₂. 1,1-Dihydroperfluorobutyl p-tosylate was prepared from Li
p-tosylate and 1,1-dihydroperfluorobutyl trifluoromethanesulfonate.
Acetolysis of CF₃SO₂OMe was studied and the results given in a table.

IT Alkylation
(by polyfluoroalkyl perfluoroalkanesulfonates)

IT Reaction kinetics and(or) Velocity
(of alkyl perfluoroalkanesulfonates)

IT Acetolysis
(of methyl nonafluoro-1-butanesulfonate and Me
trifluoromethanesulfonate, kinetics of)

IT Sulfonic acids
(polyfluoroalkyl esters of perfluoroalkane, preparation and alkylation by)

IT 333-27-7, Methanesulfonic acid, trifluoro-, methyl ester 6401-03-2,
1-Butanesulfonic acid, nonafluoro-, methyl ester
(acetolysis of, kinetics of)

IT 109-89-7, Diethylamine
(alkylation by 2,2,2-trifluoroethyl trifluoromethanesulfonate)

IT 67-56-1, Methanol
(polyfluoroalkyl perfluoroalkanesulfonate solvolysis in, kinetics of)

IT 6226-25-1, Ethanol, 2,2,2-trifluoro-, trifluoromethanesulfonate
6226-26-2, Ethanol, 2,2,2-trifluoro-, pentafluoroethanesulfonate
6226-26-2, Ethanesulfonic acid, pentafluoro-, 2,2,2-trifluoroethyl
ester 6401-00-9, Methanesulfonic acid, trifluoro-, 2,2,3,3,3-
pentafluoropropyl ester 6401-02-1, Methanesulfonic acid, trifluoro-,
2,2,3,3-tetrafluoropropyl ester
(preparation and methanolysis of)

IT 6226-25-1, Methanesulfonic acid, trifluoro-, 2,2,2-trifluoroethyl ester
6401-01-0, 1-Butanol, 2,2,3,3,4,4,4-heptafluoro-,
trifluoromethanesulfonate
(preparation and reactions of)

IT 312-66-3, 1-Butanol, 2,2,3,3,4,4,4-heptafluoro-, p-toluenesulfonate
370-68-3, Triethylamine, 2,2,2-trifluoro- 6226-29-5, Triethylamine,
2,2,2-trifluoro-, hydrochloride
(preparation of)

IT 7681-82-5, Sodium iodide
(reaction with trifluoromethyl pentafluoroethanesulfonate, kinetics of)

STN search for 10765,797

L12 ANSWER 36 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1963:461564 CAPLUS

DN 59:61564

OREF 59:11258g-h,11259a-d

ED Entered STN: 22 Apr 2001

TI Halogenated organic compounds

PA Pennsalt Chemicals Corp.

SO 31 pp.

DT Patent

LA Unavailable

CC 33 (Aliphatic Compounds)

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI GB 926411		19630515	GB	
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PRAI US		19580516		
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CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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GB 926411

AB Halogenated alkyl halides are treated with ClSO₃H and FSO₃H to give halogenated alkyl halosulfates which can be converted to dicarboxylic acids. Thus, a mixture of 50 g. ClSO₃H and 11.8 g. 1-iodoperfluoropropane is sealed in an ampul under a N atmospheric, the ampul is shaken and heated at 130° for 65 hrs., cooled and opened, and the reaction mixture warmed to room temperature and distilled to give perfluoropropyl chlorosulfate, b. 80°, n_D 1.3124, λ 203 mμ (vapor phase), 218 mμ (isooctane), 275 mμ, 6.82 μ (vapor) and 6.89 μ (liquid). Similarly prepared are (infrared given): a mixture of C₃F₇[CF₂CF(CF₃)]₄(CF₂CF₂)₁₂ average OSO₂Cl, C₃F₇[CF₂CF(CF₃)]₄(CF₂CF₂)₉ average OSO₂Cl (b0.1 135-40°), C₃F₇[CF(CF₃)]₄(CF₂CF₂)₁₁ average OSO₂Cl (b0.1 180-90°), C₃F₇[CF₂CF(CF₃)]₄(CF₂CF₂)₁₃ average OSO₂Cl (b0.1 190-200°), and C₃F₇[CF₂CF(CF₃)]₄(CF₂CF₂)₂₅ average (m. 245-81°), 6.85 μ (mixture), ClCF₂CF(CF₃)[CF₂CF(CF₃)]₂ average (CF₂CF₂)₄ average OSO₂Cl, --;

C₂F₅(CF₂CF₂)₃OSO₂Cl, --; ClO₂SO(CF₂CF₂)₃OSO₂Cl, --; ClO₂SO(CF₂)₅OSO₂Cl, --; ClO₂SOCF₂(CH₂CF₂)₄OSO₂Cl, --; EtCF(CF₃)(CH₂CF₂)₃OSO₂Cl (b0.1 74-86°), --; ClCF₂CF(CF₃)(CH₂CF₂)_{4.5} average OSO₂Cl, --; CF₃(CF₂)₃CF(OSO₂Cl)CF₃, --; ClCF₂CFClOSO₂Cl (b100 76° n_{30D} 1.392), 6.9 μ (liquid) and 6.8 μ (vapor); FCCl₂CF₂OSO₂Cl (b100 76° n_{25D} 1.3943), 6.89 μ (liquid) and 6.82 μ (vapor); ClCF₂CHClOSO₂Cl (b5 78-9°, n_{25D} 1.418), 6.9 μ; CF₃(CF₂)₂OSO₂F (b. 46°, n_{25D} 1.290), 6.65 μ (vapor); ClCF₂CFClOSO₂F (b. 89°, n_{24D} 1.3468), 6.71 μ (vapor); C₂F₅CF(CF₃)(CH₂CF₂)₃OSO₂F (b100 114°), 6.75 μ (liquid); C₃F₇[CF₂CF(CF₃)]₂OSO₂F (b. 85-9°), 6.7 μ; CF₃CFClOSO₂Cl (b. .apprx.90°), --; and CF₃CCl₂OSO₂Cl (b100 .apprx.77°), -. Anhydrous NH₃ is passed into a solution of 1 g. C₃F₇OSO₂Cl in 25 ml. anhydrous ether at -75° to give 0.6 g. C₂F₅CONH₂, m. 93.5-4.5°, 100% yield. Similarly prepared are (infrared spectra given): C₂F₅CO₂Na, -- (Et ester, -); C₃F₇[CF₂CF(CF₃)]₄(CF₂CF₂)₈ average CF₂CO₂H, 5.63 μ and 3 μ; C₃F₇[CF₂CF(CF₃)]₄(CF₂CF₂)₁₀₀ average CF₂CO₂Na, 5.9 μ; C₃F₇[CF₂CF(CF₃)]₄(CF₂CF₂)₈ average CF₂CONH₂ (b0.1 115-19°), --; a mixture of C₄F₉CO₂H and C₄H₉COCF₃ [from C₄H₉CF(OSO₂Cl)CF₃], --; ClCF₂CO₂Na, - [Et ester, -, amide (m. 81-2°), --]; ClCF₂CHO [2,4-dinitrophenylhydrazine (m. 135°) (n-heptane)]; ClCF₂CHCl[CF₂CHCl]₃ average COCHF₂, --; o-BrC₆H₄NHCOC₂F₅ (m. 126°), --; (iso-Bu)₂NCOC₃F₇ (m. 155°) (C₆H₆), --; perfluorobutyric acid dicyclohexylamide [m. 180° (C₆H₆)], --; C₃F₇CF₂CF(CF₃)CF₂COCF₃, 5.52 μ; C₃F₇CF₂CF(CF₃)CF₂CO₂Na, --; C₂F₅(CF₂CF₂)₂CF₂CO₂Me, --; C₂F₅(CF₂CF₂)₂CF₂CH₂OH (b. 144°, m. 37°), --;

STN search for 10765,797

C2F5(CF2CF2)2CF2C02(CH2)5O2CCF2(CF2CF2)2C2F5 (b7 160°), --; a thermoplastic with the recurring structure: [-O2C(CF2)3CO2(CH2)3-], --; a polyester with the recurring unit: [-O2C(CF2)4CO2(CH2)6-], -; a polyamide with the recurring unit: [-NHCO(CF2)4CONH(CH2)6-], -; EtSCOC2F5 (b. 119°), -; C2F5COS(CH2)5- SCOC2F5 (b8 128°); and C2F5CH2NH2 [b. 50° (from C2F5-CONH2)], -.

- IT Cucumber (*Cucumis sativus*)
(diseases of, control of *Pythium* and *Rhizoctonia solani*)
- IT Sugar beets
(diseases of, *Aphanomyces cochlioides* control on)
- IT Esters
(fluoro)
- IT Aldehydes
Amides
Ketones
(halo)
- IT Alkyl iodides
(halogenated, reaction with ClSO3H and fluorosulfuric acid)
- IT Acids
(in body fluids, halo)
- IT Spectra, infrared
(of fluorinated compds.)
- IT Alcoholysis
Ammonolysis
Hydrolysis
(of halogenated alkyl halosulfates)
- IT Spectra, visible and ultraviolet
(of heptafluoropropyl chlorosulfate)
- IT Halogen compounds
(organic)
- IT Thiols
(reactions of, with halogenated alkyl halosulfates)
- IT Amines
(reactions of, with halogenated halosulfates)
- IT Strawberries
(*Verticillium albo-atrum* control on)
- IT Cotton
Potatoes
(*Rhizoctonia solani* control on)
- IT Beans and (or) *Phaseolus*
(*phizoctonia solani* control in)
- IT 1,3-Propanediol, polyesters with hexafluoroglutaric acid
Glutaric acid, hexafluoro-, polyester with 1,3-propanediol
- IT 1,6-Hexanediamine, polymer with octafluorohexanedioic acid
(amide polymers)
- IT 7790-94-5, Chlorosulfuric acid
(fluorinated alkyl esters)
- IT 25067-11-2, Propene, hexafluoro-, polymer with C2F4
(functional derivs. of)
- IT 7789-21-1, Fluorosulfuric acid
(haloalkyl esters)
- IT 184955-94-0, Hexanedioic acid, octafluoro-, polymer with 1,6-hexanediamine
(polyamide)
- IT 55492-48-3, 1,6-Hexanediol, polymer with octafluorohexanedioic acid
(polyesters)
- IT 307-30-2, 1-Octanol, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-
336-30-1, Butyramide, 2,2,3,3,4,4,4-heptafluoro-N,N-diisobutyl-
337-31-5, 1,5-Pentanedithiol, bis(pentafluoropropionate) 354-28-9,
Acetamide, 2-chloro-2,2-difluoro- 354-76-7, Propionamide,
2,2,3,3,3-pentafluoro- 376-27-2, Octanoic acid, pentadecafluoro-, methyl

STN search for 10765,797

ester 378-77-8, Propionic acid, pentafluoro-, sodium salt 379-09-9, Propionic acid, pentafluorothio-, S-ethyl ester 383-62-0, Acetic acid, chlorodifluoro-, ethyl ester 386-84-5, Butyramide, N,N-dicyclohexyl-2,2,3,3,4,4,4-heptafluoro- 422-03-7, Propylamine, 2,2,3,3,3-pentafluoro-426-65-3, Propionic acid, pentafluoro-, ethyl ester 464-32-4, 1,5-Pentanediol, bis(pentadecafluorooctanoate) 464-32-4, Octanoic acid, pentadecafluoro-, pentamethylene ester 560-89-4, 3-Hexanone, dodecafluoro- 646-84-4, Heptanoic acid, 2,2,3,4,4,5,5,6,6,7,7,7-dodecafluoro-3-(trifluoromethyl)-, sodium salt 647-33-6, 1-Octanol, heptadecafluoro-, chlorosulfate 649-52-5, 1-Heptanol, 1,1,3,3,5,6,6,7,7,7-decafluoro-5-(trifluoromethyl)-, fluorosulfate 649-60-5, Ethanol, 1-chloro-1,2,2,2-tetrafluoro-, chlorosulfate 655-72-1, Acetaldehyde, chlorodifluoro-, (2,4-dinitrophenyl)hydrazone 662-97-5, 1-Propanol, heptafluoro-, chlorosulfate 662-98-6, 1-Propanol, heptafluoro-, fluorosulfate 678-68-2, 1,5-Pentanediol, decafluoro-, bis(chlorosulfate) 681-13-0, 1-Nonanol, 1,1,3,3,5,5,7,8,8,9,9-dodecafluoro-7-(trifluoromethyl)-, chlorosulfate 681-23-2, Ethanol, 1,1-dichloro-2,2,2-trifluoro-, chlorosulfate 681-24-3, Ethanol, 1,2-dichloro-1,2,2-trifluoro-, chlorosulfate 681-25-4, Ethanol, 1,2-dichloro-1,2,2-trifluoro-, fluorosulfate 681-27-6, Ethanol, 2,2-dichloro-1,1,2-trifluoro-, chlorosulfate 754-46-1, 2-Octanone, 1,1,1,3,3,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-4-(trifluoromethyl)- 811-96-1, Acetaldehyde, chlorodifluoro- 819-24-9, 1,9-Nonanediol, 1,1,3,3,5,5,7,7,9,9-decafluoro-, bis(chlorosulfate) 1426-24-0, 2-Hexanol, tridecafluoro-, chlorosulfate 1426-37-5, 1,6-Hexanediol, dodecafluoro-, bis(chlorosulfate) 1895-39-2, Acetic acid, chlorodifluoro-, sodium salt 2070-80-6, 2-Octanol, 1,1,1,2,3,3,4,5,5,6,6,7,7,8,8,8-hexadecafluoro-4-(trifluoromethyl)-, fluorosulfate 2706-89-0, Valeric acid, nonafluoro-, sodium salt 2821-98-9, Ethanol, 1,2-dichloro-2,2-difluoro-, chlorosulfate 2925-54-4, Propionanilide, 2'-bromo-2,2,3,3,3-pentafluoro-(preparation of)

IT 7789-21-1, Fluorosulfuric acid 7790-94-5, Chlorosulfuric acid (reaction with halogenated alkyl iodides)

L12 ANSWER 37 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1961:111625 CAPLUS

DN 55:111625

OREF 55:20940g-i

ED Entered STN: 22 Apr 2001

TI Fluorocarbon halosulfates and a new route to fluorocarbon acids and derivatives. II. Polyfluoroalkyl fluorosulfates

AU Hauptschein, Murray; Braid, Milton

CS Pennsalt Chem. Corp., Philadelphia, PA

SO Journal of the American Chemical Society (1961), 83, 2505-7

CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA Unavailable

CC 10B (Organic Chemistry: Aliphatic Compounds)

AB A number of fluorocarbon fluorosulfonates were prepared C3F7I (15 g.) and 30 g. FSO3H in an evacuated sealed tube shaken 5 hrs. at 150° gave 0.5 g. SO2, SiF4, and C3F8; the residual liquid poured onto chipped ice and the lower layer worked up gave a mixture of 5.5 g. C3F7I and 5 g. C3F7OSO2F (I), b. 46°, n25D below 1.290. Dry NH3 passed 10 min. into 0.24 g. I in 10 cc. dry Et2O at 0° yielded 0.2 g. (crude) C2F5CONH2. FSO3H (45 g.) treated with stirring at 70° with 40 g. CClF2CClFI (II) during 0.5 hr. gave traces of (CClF2)2 in the evolved gases; the mixture stirred 2 hrs. at 70°, cooled, and poured onto chipped ice yielded a mixture of 8 g. CClF2CClFOSO2F (III) and 30 g. unchanged II, which vapor-phase chromatographed yielded pure III, b. 89°, n24D 1.3468.

STN search for 10765,797

Dry NH₃ passed 15 min. into 0.2 g. III in 10 cc. CCl₂FCClF₂ at 0° gave 0.1 g. CClF₂CONH₂. FSO₃H (40 g.) treated dropwise with stirring during 15 min. with 10 g. C₂F₅CF(CF₃)(CH₂CF₂)₂I, the mixture stirred 1.25 hrs. at 40°, and worked up gave 9.5 g. (crude) C₂F₅CF(CF₃)(CH₂CF₂)₂OSO₂F (IV), b₁₀₀ 114°, containing a small amount of C₂F₅CF(CF₃)CH₂CF₂CH₂COF. Dry NH₃ passed 15 min. into 2 g. IV in 10 cc. dry Et₂O at 0° gave 0.15 g. C₂F₅CF(CF₃)CH₂CF₂CH₂CONH₂, b_{0.1} about 85-6°.

IT 354-28-9, Acetamide, 2-chloro-2,2-difluoro- 354-76-7, Propionamide, 2,2,3,3,3-pentafluoro- 648-26-0, Heptanoyl fluoride, 3,3,5,6,6,7,7,7-octafluoro-5-(trifluoromethyl)- 649-52-5, 1-Heptanol, 1,1,3,3,5,6,6,7,7,7-decafluoro-5-(trifluoromethyl)-, fluosulfonate 662-98-6, 1-Propanol, heptafluoro-, fluosulfonate 681-25-4, Ethanol, 1,2-dichloro-1,2,2-trifluoro-, fluosulfonate 6104-12-7, Heptanamide, 3,3,5,6,6,7,7,7-octafluoro-5-(trifluoromethyl)- (preparation of)

L12 ANSWER 38 OF 38 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1961:111624 CAPLUS

DN 55:111624

OREF 55:20939f-i,20940a-g

ED Entered STN: 22 Apr 2001

TI Fluorocarbon halosulfates and a new route to fluorocarbon acids and derivatives. I. Polyfluoroalkyl chlorosulfates

AU Hauptschein, Murray; Braid, Milton

CS Pennsalt Chem. Corp., Philadelphia, PA

SO Journal of the American Chemical Society (1961), 83, 2500-5
CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA Unavailable

CC 10B (Organic Chemistry: Aliphatic Compounds)

AB The novel reaction of ClSO₃H with fluorocarbon iodides yielded fluorocarbon chlorosulfates (I) and fluorocarbon chlorides. The mechanism of the formation of the I was discussed. Convenient 1-step syntheses of carboxylic acids and derivs. from these I were reported. ClSO₃H (50 g.) and 11.8 g. C₃F₇I (II) in a sealed tube under N shaken 65 hrs. at 130° gave 0.9 g. C₃F₇I and 10.7 g. C₃F₇OSO₂Cl (III), b. 80°, n_D²⁰ 1.3124. II (15 g.) and 25 g. ClSO₃H heated 2 hrs. at 155° in a sealed tube gave 4.5 g. C₃F₇Cl, 7 g. III, and 0.9 g. unchanged II. C₃F₇I (15 g.) and 25 g. ClSO₃H heated 17 hrs. with shaking at 95° gave only about 5% conversion to III. III (0.2 g.) treated with 2 cc. H₂O in small portions, the mixture evaporated on the steam bath, and the dried residue extracted with dry Et₂O gave from the extract nearly 100% C₂F₅CO₂Na.

Dry

NH₃ passed 10 min. into 1 g. III in 25 cc. dry Et₂O at -75° with shaking, the mixture warmed slowly to room temperature, filtered, and evaporated

yielded 0.7 g. C₂F₅CONH₂, m. 93.5-4.5° (CCl₂FCClF₂). III (2.8 g.) and 1 g. absolute EtOH refluxed 1 hr. gave 1.7 g. C₂F₅CO₂Et and 0.3 g. unchanged III. C₃F₇[CF₂CF(CF₃)]₄I (IV) (40 g.) in a monel autoclave evacuated, cooled to -195°, charged with 40 g. C₂F₄, heated with shaking 18 hrs. at 190°, and worked up gave 1 g. unchanged C₂F₄, 8 g. unchanged IV, and 70 g. C₃F₇[CF₂CF(CF₃)]₄[CF₂CF₂]_nI (n = 12 average containing n < 9 to > 25) (V), white soft solid. ClSO₃H (25 g.) and 14.5 g. V heated in a sealed tube under dry N 17 hrs. with shaking at 150° gave 12 g. crude C₃F₇[CF₂CF(CF₃)]₄[CF₂CF₂]_nOSO₂Cl (n = 12 average); a 7.5-g. aliquot distilled gave 1.8 g. C₃F₇[CF₂CF(CF₃)]₄[CF₂CF₂]_nOSO₂Cl (n = 9 average) (VI), white opalescent, viscous oil, 1.8 g. C₃F₇[CF₂CF(CF₃)]₄[CF₂CF₂]_nOSO₂Cl (n = 11 average) (VII), a white soft wax, b. 180-90°, 1.4 g.

C3F7[CF2CF(CF3)]4[CF2CF2]nOSO2Cl (n = 18 average), a white wax, and 1.5 g. white friable residue, which did not decompose above 400°. VI refluxed several hrs. with H2O gave C3F7[CF2CF(CF3)]4[CF2CF2]nCF2CO2H (n = 8 average) (VIII). VII (0.3 g.) refluxed with excess 20% aqueous NaOH gave

0.25

g. Na salt of the carboxylic acid. Dry NH3 passed 15 min. into 0.5 g. VII in 10 cc. dry Et2O at -75° gave 0.4 g. amide of VIII, b0.1 about 115-19°. ClSO3H (50 g.) treated dropwise with stirring under N with 26 g. C2F5CF(CF3)(CH2CF2)3I (XI) during 20 min. at 4-5°, the mixture stirred 1.5 hrs. at 0-4°, treated dropwise with 40 cc. iced H2O, and the product isolated by extraction with CCl2FCClF2 gave 4.5 g. unchanged XI and 18 g. (crude) C2F5CF(CF3)(CH2CF2)3OSO2Cl (XII), b0.1 about 80°, n27D 1.352. XII (10 g.) refluxed 4 hrs. with 15 cc. H2O gave 9.5 g. liquid, b0.1 mainly 78-82°, n24D 1.353, consisting almost entirely of unreacted XII containing a small amount of C2F5CF(CF3)(CH2CF2)2CH2CO2H (XIII). XII (0.8 g.) and 10 cc. H2O refluxed several hrs. during which small portions of NaHCO3 were added intermittently, acidified with dilute H2SO4, and extracted with Et2O gave 0.5

g.

XIII, b0.1 about 110-11°. XII (11 g. shaken with 50 g. 20% aqueous NaOH to solution with occasional cooling, acidified with concentrated HCl, and extracted with CClF2CCl2F gave 7.5 g. (crude) C2F5CF(CF3)CH2CF2CH2CF:CHCO2H (XIV), slightly yellow oil, b0.1 89-90°, n27D 1.370. XIV (about 1 g.) refluxed 2 hrs. with excess 20% aqueous NaOH, neutralized with concentrated H2SO4, and extracted with Et2O yielded 0.5 g. brown viscous oil, b0.1 about 95-7°, possibly C2F5CF(CF3)CH2(CF:CH)2CO2H. Dry NH3 passed 15 min. into 1 g. XII in 40 cc. dry Et2O at 0° gave 0.7 g. amide of XIII, b<0.1 109-10°. XII (3.5 g.) and 5 g. absolute EtOH refluxed 1.5 hrs., poured into 20 cc. iced H2O, and worked up gave 2.7 g. Et ester of XIII, b0.1 80-1°, n29D 1.345. CClF2CF(CF3)(CH2CF2)nI (n = 4.5 average) (18 g.) treated very slowly under N with 25 g. ClSO3H, the mixture stirred 2 hrs. at 0°, and diluted with H2O yielded 12 g. mixture of CClF2CF(CF3)(CH2CF2)nCH2CO2H (n = 3.5 average) (XV) and the acid fluoride (XVI) of XV. XVI (7 g.) in 50 cc. dry Et2O treated 0.25 hrs. with dry NH3 gave 5.3 g. amide of XV, b0.1 156-62°, m. 49-50° (CCl2FCClF2). ClSO3H (20 g.) and 5 g. C4F9CFICF3 (XVII) heated 112 hrs. in a sealed tube at 148° gave 4 g. (crude) C4F9CClFCF3 (XVIII), b. 83-4°, n26D 1.2826. XVII (17.8 g.) and 50 g. ClSO2H in a sealed tubes heated 4.25 hrs. at 75° and 2 hrs. at 95° gave mainly unchanged XVII and small amts. of XVIII and C4F9CF(OSO2Cl)CF3 (XIX). Crude XIX (28 g.) shaken with H2O, the aqueous phase neutralized with dilute

aqueous

NaOH, evaporated, and the residue extracted in a Soxhlet apparatus with dry Et2O gave

from the extract a small amount of a Na salt, probably C4F9CO2Na. XVII (8.9 g.) and 29 g. SO2Cl2 heated 11 hrs. with shaking at 100-15° in a sealed tube gave only XVII containing a trace of XVIII.

IT Acids

(fluoro, and derivs.)

IT Fluorocarbons

(halosulfates and their reactions)

IT 422-64-0, Propionic acid, pentafluoro-
(derivs.)

IT 7789-21-1, Fluosulfonic acid 7790-94-5, Chlorosulfonic acid
(polyfluoroalkyl derivs.)

IT 354-76-7, Propionamide, 2,2,3,3,3-pentafluoro- 662-97-5,
1-Propanol, heptafluoro-, chlorosulfonate 662-98-6, 1-Propanol,
heptafluoro-, fluosulfonate 681-13-0, 1-Nonanol, 1,1,3,3,5,5,7,8,8,9,9,9-
dodecafluoro-7-(trifluoromethyl)-, chlorosulfonate 756-85-4, Nonanamide,
3,3,5,5,7,8,8,9,9,9-decafluoro-7-(trifluoromethyl)- 756-86-5, Nonanoic

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acid, 3,3,5,5,7,8,8,9,9,9-decafluoro-7-(trifluoromethyl)- 756-87-6,
2-Nonenoic acid, 3,5,5,7,8,8,9,9,9-nonafluoro-7-(trifluoromethyl)-
1426-23-9, Hexane, 2-chlorotridecafluoro- 1426-24-0, 2-Hexanol,
tridecafluoro-, chlorosulfonate 2706-89-0, Valeric acid, nonafluoro-,
sodium salt 3791-09-1, Nonanoic acid, 3,3,5,5,7,8,8,9,9,9-decafluoro-7-
(trifluoromethyl)-, ethyl ester 4572-40-1, 2,4-Nonadienoic acid,
3,5,7,8,8,9,9,9-octafluoro-7-(trifluoromethyl)-
(preparation of)

IT 2838-72-4, Dodecane, docosafluoro-2-iodo-4,6,8-tris(trifluoromethyl)-
(reaction products of)

=> d his

(FILE 'HOME' ENTERED AT 13:11:01 ON 24 FEB 2005)

FILE 'REGISTRY' ENTERED AT 13:11:06 ON 24 FEB 2005

L1 745 S TRIFLATE
L2 8 S PENTAFLUOROETHANESULFONATE
L3 4972 S HEPTAFLUOROPROPYL?
L4 0 S L3 AND DYE
L5 13 S L3 AND SULFONATE
L6 2832 S NONAFLUOROBUTYL?
L7 13 S L5 AND SULFONATE
L8 13 S L7 NOT L
L9 21 S L7 OR L5 OR L2

FILE 'CAPLUS' ENTERED AT 13:14:05 ON 24 FEB 2005

L10 42 S L9
L11 4 S L10 AND (LITHOGRAPH?)
L12 38 S L10 NOT L11

=> file uspatful

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
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FILE COVERS 1971 TO PATENT PUBLICATION DATE: 24 Feb 2005 (20050224/PD)

FILE LAST UPDATED: 24 Feb 2005 (20050224/ED)

HIGHEST GRANTED PATENT NUMBER: US6859937

HIGHEST APPLICATION PUBLICATION NUMBER: US2005044601

CA INDEXING IS CURRENT THROUGH 24 Feb 2005 (20050224/UPCA)

ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 24 Feb 2005 (20050224/PD)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Dec 2004

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Dec 2004

>>> USPAT2 is now available. USPATFULL contains full text of the <<<
>>> original, i.e., the earliest published granted patents or <<<
>>> applications. USPAT2 contains full text of the latest US <<<
>>> publications, starting in 2001, for the inventions covered in <<<
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>>> published document but also a list of any subsequent <<<
>>> publications. The publication number, patent kind code, and <<<

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>>> publication date for all the US publications for an invention <<<
>>> are displayed in the PI (Patent Information) field of USPATFULL <<<
>>> records and may be searched in standard search fields, e.g., /PN, <<<
>>> /PK, etc. <<<
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>>> USPATFULL and USPAT2 can be accessed and searched together <<<
>>> through the new cluster USPATALL. Type FILE USPATALL to <<<
>>> enter this cluster. <<<
>>> <<<
>>> Use USPATALL when searching terms such as patent assignees, <<<
>>> classifications, or claims, that may potentially change from <<<
>>> the earliest to the latest publication. <<<
```

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l21

L21 NOT FOUND

The L-number entered has not been defined in this session, or it has been deleted. To see the L-numbers currently defined in this session, enter DISPLAY HISTORY at an arrow prompt (=>).

=> d his

(FILE 'HOME' ENTERED AT 13:11:01 ON 24 FEB 2005)

FILE 'REGISTRY' ENTERED AT 13:11:06 ON 24 FEB 2005

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L1      745 S TRIFLATE
L2      8 S PENTAFLUOROETHANESULFONATE
L3      4972 S HEPTAFLUOROPROPYL?
L4      0 S L3 AND DYE
L5      13 S L3 AND SULFONATE
L6      2832 S NONAFLUOROBUTYL?
L7      13 S L5 AND SULFONATE
L8      13 S L7 NOT L
L9      21 S L7 OR L5 OR L2
```

FILE 'CAPLUS' ENTERED AT 13:14:05 ON 24 FEB 2005

```
L10     42 S L9
L11     4 S L10 AND (LITHOGRAPH?)
L12     38 S L10 NOT L11
```

FILE 'USPATFULL' ENTERED AT 13:15:22 ON 24 FEB 2005

=> s l9

L13 9 L9

=> d pn, ab 1-9

L13 ANSWER 1 OF 9 USPATFULL on STN

PI US 2004132865 A1 20040708

AB A method to reduce haze in the production of fire resistant polycarbonate compositions comprising flame retardant salts, wherein the salt is blended with a first polycarbonate to form a concentrate, and the concentrate is then added to a second polycarbonate resin.

L13 ANSWER 2 OF 9 USPATFULL on STN

PI US 2003229165 A1 20031211

AB A process for producing a fire resistant polycarbonate composition comprises preparing an aqueous solution of a flame retardant salt; and

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compounding the aqueous solution of the flame retardant salt with a polycarbonate composition to form the fire resistant polycarbonate composition. The process reduces the level of haze, color and inclusions compared to fire resistant polycarbonate compositions compounded with the same flame retardant salt in solid form.

L13 ANSWER 3 OF 9 USPATFULL on STN

PI US 2003040443 A1 20030227

AB Phosphate ester based functional fluids containing novel anti-erosion additives provides enhanced results in erosion control.

L13 ANSWER 4 OF 9 USPATFULL on STN

PI US 2002123544 A1 20020905

US 6730720 B2 20040504

AB A method to reduce haze in the production of fire resistant polycarbonate compositions comprising flame retardant salts, wherein the salt is blended with a first polycarbonate to form a concentrate, and the concentrate is then added to a second polycarbonate resin.

L13 ANSWER 5 OF 9 USPATFULL on STN

PI US 5258249 19931102

AB An electrophotographic lithographic printing plater precursor which utilizes an electrophotographic light-sensitive material comprising a conductive support having provided thereon at least one photoconductive layer containing photoconductive zinc oxide and a binder resin, wherein the binder resin contains at least one AB block copolymer composed of an A block comprising a polymer component corresponding to a monofunctional monomer containing a functional group which has at least one atom selected from a fluorine atom and a silicon atom and is capable of forming at least one hydrophilic group selected from a sulfo group, a phosphono group, a carboxy group and a hydroxy group through decomposition, and a B block containing at least a polymer component represented by general formula (I) described herein.

L13 ANSWER 6 OF 9 USPATFULL on STN

PI US 5176975 19930105

AB An electrophotographic lithographic printing plate precursor which utilizes an electrophotographic light-sensitive material comprising a conductive support having provided thereon at least one photoconductive layer containing photoconductive zinc oxide and a binder resin, wherein the binder resin contains at least one graft-type copolymer comprising, as a polymerizable component, at least one monofunctional macromonomer which has a weight average molecular weight of from 1×10^3 to 2×10^4 , comprises at least one polymerizable component containing a functional group which has at least one atom selected from a fluorine atom and a silicon atom and is capable of forming at least one hydrophilic group selected from a sulfo group, a phosphono group, a carboxy group and a hydroxy group through decomposition, and has a polymerizable double bond group.

L13 ANSWER 7 OF 9 USPATFULL on STN

PI US 4927962 19900522

AB A fluorocarbon carboxylic acid $R_f(\text{COOH})_{\text{sub } m}$ (R_f is $\text{C}_{\text{sub } 1} - \text{C}_{\text{sub } 10}$ perfluoroalkyl group, m is 1 or 2) is prepared by the steps of hydrolyzing $R_f(\text{COF})_{\text{sub } m}$ with water to obtain an acidic solution, neutralizing the acidic solution with aqueous solution of KOH to form $R_f(\text{COOK})_{\text{sub } m}$, precipitating and separating $R_f(\text{COOK})_{\text{sub } m}$ from the solution and converting $R_f(\text{COOK})_{\text{sub } m}$ into $R_f(\text{COOH})_{\text{sub } m}$ by acid decomposition. The content of free fluorine can extremely be reduced by treating $R_f(\text{COOK})_{\text{sub } m}$ with sulfuric acid and silica. The mother liquor

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is recycled after removing KF by treatment with a metal hydroxide and replenishing with KOH. In preparing a fluorocarbon sulfonic acid RfSO_3H (Rf is C_{1-3} perfluoroalkyl group) in substantially the same way, RfSO_3K is formed in aqueous solution of KOH by bringing gaseous RfSO_2F into contact with the KOH solution under normal pressure, while controlling the feed rate of RfSO_2F per unit area of gas-liquid contact at a sufficiently low level.

L13 ANSWER 8 OF 9 USPATFULL on STN

PI US 4371710 19830201

AB Perfluoroalkyl compounds represented by the formula (I): $\text{R}_f\text{SO}_3\text{Ar}$ wherein R_f represents a perfluoroalkyl group having 1 to 20 carbon atoms, Ar represents a substituted or unsubstituted phenyl group wherein the substituent is an alkyl group having 1 to 4 carbon atoms or a halogen atom, I represents an iodine atom, and A represents a perfluoroalkyl group having 1 to 20 carbon atoms which can be the same or different from R_f , a hydroxy group an alkyl group having 1 to 4 carbon atoms, an aryl group or a halogen atom, and processes for preparing the perfluoroalkyl compounds represented by the formula (I).

L13 ANSWER 9 OF 9 USPATFULL on STN

PI US 4324741 19820413

AB Perfluoroalkyl compounds represented by the formula (I): $\text{R}_f\text{SO}_3\text{Ar}$ wherein R_f represents a perfluoroalkyl group having 1 to 20 carbon atoms, Ar represents a substituted or unsubstituted phenyl group wherein the substituent is an alkyl group having 1 to 4 carbon atoms or a halogen atom, I represents an iodine atom, and A represents a perfluoroalkyl group having 1 to 20 carbon atoms which can be the same or different from R_f , a hydroxy group an alkyl group having 1 to 4 carbon atoms, an aryl group or a halogen atom, and processes for preparing the perfluoroalkyl compounds represented by the formula (I).

=> d his

(FILE 'HOME' ENTERED AT 13:11:01 ON 24 FEB 2005)

FILE 'REGISTRY' ENTERED AT 13:11:06 ON 24 FEB 2005

L1 745 S TRIFLATE
L2 8 S PENTAFLUOROETHANESULFONATE
L3 4972 S HEPTAFLUOROPROPYL?
L4 0 S L3 AND DYE
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L10 42 S L9
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FILE 'USPATFULL' ENTERED AT 13:15:22 ON 24 FEB 2005

L13 9 S L9

=> log y

COST IN U.S. DOLLARS

SINCE FILE
ENTRY

TOTAL
SESSION